

# JOURNAL of FARM ECONOMICS

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# JOURNAL OF FARM ECONOMICS

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## THE PRICE POLICY FOR AGRICULTURE CONTEST

**W**HEN the Executive Committee of the Association met in Washington during January, 1945, we were advised that a public-spirited citizen desired to make \$12,500 available to the Association to be used as prizes in a contest to be sponsored by the Association on the general topic of a price policy for agriculture. This represented a new departure in our activities. The Executive Committee accepted the offer and the following contract was executed between the association and the donor:

### AGREEMENT

The Executive Committee of the American Farm Economic Association hereby accepts in the name of the Association, the sum of \$12,500.00 from W. H. Jasspon.

The American Farm Economic Association allots, not to exceed \$2,500.00 toward the cost of administering this project.

It is mutually understood that this sum of \$12,500.00 is to be used in conducting a contest for the best papers on the subject "Farm Price Policies." This contest is to be sponsored by the Association, and conducted under the control of its Executive Committee.

The conditions governing the holding of the contest are contained in the attached memorandum which is hereby made a part of this agreement.

Signed the 3rd day of February 1945.

The American Farm Economic Association  
per L. J. NORTON, *President*  
W. H. JASSPON, *Donor*

The topic as stated in the folder announcing the contest was as follows:

"A Price Policy for Agriculture, Consistent with Economic Progress, That Will Promote Adequate and More Stable Income from Farming."

The awards were set up as follows: first \$5,000; second \$2,500; third \$1,250; and 15 additional awards of \$250 each. The rules provided that papers should not exceed 3,000 words, should be submitted to the Secretary by August 1, and that not more than two of the \$250 awards should go to residents of any one state.

The Executive Committee agreed on the following panel of judges, all of whom graciously accepted.

Chester C. Davis, President, Federal Reserve Bank, St. Louis, Missouri, Chairman

W. W. Waymack, Editor, The Register and Tribune, Des Moines, Iowa

Henry C. Taylor, Managing Director, The Farm Foundation, Chicago, Illinois

W. I. Myers, Dean, College of Agriculture, Cornell University, Ithaca, New York

Alvin H. Hansen, Littauer Professor of Political Economy, Harvard University, Cambridge, Massachusetts

A folder describing the contest and containing the rules was prepared and sent to all members of the association and others on request. Several thousand copies were distributed. Announcement was also made through the press and farm papers. Many of the latter carried announcements and the writer wishes to thank the various editors who gave publicity to the contest. An announcement was also carried in our Journal and in several other journals of associations in the social science field. No money was expended for advertising.

In all 317 papers were received and distributed as follows:

<i>State</i>	<i>No.</i>	<i>State</i>	<i>No.</i>
Alabama	3	Kansas	13
Arizona	1	Kentucky	7
Arkansas	3	Louisiana	2
California	14	Maine	1
Colorado	8	Maryland	7
Connecticut	3	Missouri	9
District of Columbia	14	Massachusetts	6
Florida	1	Michigan	10
Georgia	3	Minnesota	21
Idaho	2	Montana	8
Illinois	22	Nebraska	2
Indiana	18	New Jersey	2
Iowa	14	New Mexico	1

<i>State</i>	<i>No.</i>	<i>State</i>	<i>No.</i>
New York	7	Vermont	1
North Carolina	2	Virginia	16
North Dakota	6	Washington	4
Ohio	12	Wisconsin	22
Oklahoma	3	Wyoming	2
Oregon	5	Puerto Rico	1
Pennsylvania	7	Canada	1
South Dakota	7	Army (No residence)	2
Tennessee	10		
Texas	9		317
Utah	1		

As received by the Secretary the papers were coded, numerically in order of receipt and by states. All people who subsequently handled the papers worked from these numbers and did not know who wrote the individual papers.

The Secretary and this writer reviewed all of the papers for the judges and ranked them into four groups based on the following standards: (1) The inclusion of a definitely developed plan; (2) the general quality of the analysis. All papers were turned over to the judges, who met at Madison, Wisconsin on August 15, 16, and 17. The awards were announced at a dinner in Washington, D. C. on September 11, at which the Secretary of Agriculture, Mr. Clinton P. Anderson, presided. The winning papers are published in this volume. It is to be hoped that their publication will stimulate thinking, discussion, and further writing on this important topic, and that among them will be found ideas which may be useful to legislative and administrative authorities in developing programs which will carry on the objectives set out in the title of the contest.

The papers logically fall into two groups, those written by farmers and other laymen; those written by professional economists. Among the former there was a strong accent in favor of fixed prices, in many cases related to "cost of production." No definite plans were proposed for accomplishing this. This desire of many farmers for fixed prices may be considered as a wish for security against the effects of fluctuating prices and depressions accompanied by severe price declines.

The professional group of papers included a wide variety of proposals. In general the present parity formula was considered to be outmoded and the entire concept of parity was held to be unworkable by a number. A wide variety of suggestions were made

for revising the parity formula. In general these provided for the use of some more recent base so that individual price parities would more nearly reflect the basic changes which have affected the relative position of the prices of individual commodities since the present parity base period, 1910-1914. Very little emphasis was placed on production control.

Among the prize winning papers there was a strong accent on the desirability of general measures that would maintain a vigorous and prosperous general economy, greater freedom in prices of individual commodities than is possible under existing price support legislation, some type of "forward pricing" in order to guide production, and government supplementary payments to maintain total returns from individual products or total overall farm income. In some papers the suggestion was made that these payments be tied to some overall measure of economic activity or income.

The general trend of thought was toward freer markets accompanied by measures to support some minimum level of farm income. Although not specifically developed in all of the papers the justifications for this procedure are (1) it would permit the price structure to perform its normal functions of guiding production and distribution of commodities and (2) it would provide a minimum level of income to farmers in depression periods for continuing production of needed goods (foods and fibers) at a time when the industrial sector of the economy is shrinking. If properly worked out, assurance of such minimum income would tend to satisfy the desire for security against extreme price (and income) declines reflected in many of the papers submitted by farmers.

The writer wishes to express his appreciation to all contributors to the contest, to the judges, to officials of the University of Wisconsin who helped to make pleasant the judges' visit to Madison, to the other officers and members of the Association who rendered assistance, and finally to Mr. W. H. Jasspon of Memphis, Tennessee and Washington, D. C. whose contribution of funds and interest made the contest possible.

L. J. NORTON, *President*



## STATEMENT BY CHAIRMAN OF THE AWARD JUDGES

THE JUDGES accepted the invitation of the president of the American Farm Economic Association to judge this contest with full recognition of the difficulty of the task, and the responsibility involved in selecting the best papers written on such a many-sided subject as "a price policy for agriculture." The papers we selected are published in this volume.

The names of the authors of the prizewinning papers, with their states of residence and business or professional connections, are as follows:

	<i>Name</i>	<i>State of Residence</i>	<i>Connection</i>
First Paper (\$5,000 award)	William H. Nicholls	Illinois	Dept. of Economics University of Chicago Chicago, Illinois
Second Paper (\$2,500 award)	D. Gale Johnson	Illinois	Dept. of Economics University of Chicago Chicago, Illinois
Third Paper (\$1,250 award)	Frederick V. Waugh	Virginia	Office of War Mobilization and Recon- version Washington, D. C.
(\$250 awards)	George W. Barr	Arizona	Dept. of Economics University of Arizona Tucson, Arizona
	Merrill K. Bennett	California	Food Research Institute Stanford University Palo Alto, California
	Gordon P. Boals	District of Columbia	Office of Foreign Agricultural Relations U. S. Dept. of Agriculture
	Karl Brandt	California	Food Research Institute Stanford University Palo Alto, California
	Willard W. Cochrane	Virginia	Bureau of Agricultural Economics U. S. Dept. of Agriculture
	R. J. Eggert	Illinois	American Meat Institute Chicago, Illinois
	Paul A. Eke	Idaho	Dept. of Agricultural Economics University of Idaho Moscow, Idaho
	Carl C. Farrington	Maryland	Production & Marketing Administration U. S. Department of Agriculture
	Rudolph K. Froker	Wisconsin	Dept. of Agricultural Economics University of Wisconsin Madison, Wisconsin
	Charles D. Hyson	Massachusetts	Harvard University Cambridge, Massachusetts
	Adlowe L. Larson	Oklahoma	Dept. of Agricultural Economics Oklahoma Agr. & Mechanical College Stillwater, Oklahoma
	James G. Maddox	Virginia	Bureau of Agricultural Economics U. S. Dept. of Agriculture
	Rainer Schickele	District of Columbia	Bureau of Agricultural Economics U. S. Dept. of Agriculture
	Geoffrey Shepherd	Iowa	Dept. of Agricultural Economics Iowa State College Ames, Iowa
	Lawrence H. Simerl	Illinois	Illinois Agricultural Association Chicago, Illinois

Our present agricultural price policy has developed from a considerable period of evolution in federal law and administrative machinery. During the war the emphasis shifted from production control with support to prices and parity payments to producers of

certain basic products, to the active use of guaranteed minimum support prices to encourage and expand production of a wide variety of agricultural products. Higher price levels for farm products developed during the war as the result of increased demands and the government war-time fiscal policies. Congress has authorized the support of the prices of a number of commodities at 90% of parity for a two-year period after the January 1 following official proclamation of the termination of hostilities. Moreover, the basic prewar legislation still remains on the statute books.

A great deal of experience has been gained out of this activity in connection with supporting price. Some programs have worked out as expected and hoped; others have been disappointing. The evolutionary process will probably continue; changing conditions and past experience will bring about needed revisions in existing legislation in the search for workable arrangements which will protect farmers against extreme vicissitudes of price and income fluctuations but which will leave prices and markets for farm products reasonably free to clear large-volume production and to encourage production shifts to meet changing demand conditions.

The present attitude of the nation favors producing abundantly in all segments of the economy in order to achieve and hold a high level of national income and a high living standard. These objects require high level production both in industry and in agriculture. In dealing with postwar farm price policies the contestants generally recognized this as a basic fact, and proposed methods to encourage high level production of agricultural products and the widespread distribution and consumption of large quantities of farm commodities. Along with this goal the prize winners bracketed another—the necessity to maintain parity of income between agricultural and non-agricultural workers, and various plans and devices to accomplish this were proposed.

On behalf of the committee of judges it should be stated that our function was to rate the 300-odd papers on what the committee considered their relative merits as essays of 3,000 words or less on the assigned subject. The sponsors of the contest felt that, if this were done, the top group of papers would, in the aggregate, offer useful suggestions and guides which might be studied by those who are responsible for formulating and carrying out agricultural price and income policies in the postwar period.

CHESTER C. DAVIS, *Chairman Award Judges*

*The First Award Paper*

A PRICE POLICY FOR AGRICULTURE, CONSISTENT  
WITH ECONOMIC PROGRESS, THAT WILL  
PROMOTE ADEQUATE AND MORE  
STABLE INCOME FROM FARMING

WILLIAM H. NICHOLLS  
*University of Chicago*

*A. The Necessity for an Integrated Agricultural Policy*

EXISTING agricultural price policy is the heritage of the sectional isolationism of the 1930's. "Overabundance," not scarcity, was the specter which haunted American agriculture, labor and industry alike. And each group, aided and abetted by government, vainly strove to live unto itself in an inextricably interdependent economy. Even under the unifying pressure of the war, this depression-born restrictionism yielded but slowly to the insatiable demands of Mars. True, a glorious record of unprecedented production ultimately resulted. But, even then, the running battle between agriculture and labor, while inflation control hung in the balance, re-emphasized the hazards of the wholesale transfer of price-making into the political arena. Clearly, if we are to evolve a more stable and productive postwar economy, we must profit by these recent experiences.

The general welfare is much more than the sum total of special interests. Hence, if agricultural (or labor or industrial) policy is to be consistent with economic progress, it must be an integral part of a sound national economic policy, based upon forward-looking political and economic cooperation. The essential objectives of such a national economic policy are:

- (1) greater economic stability;
- (2) an expanding aggregate *real* income; and
- (3) a rising minimum scale of family living.

No sector of our economy, least of all agriculture, can fail to have a primary interest in the realization of these three goals. Yet they cannot be attained by any one economic group in isolation. This paper explores the means by which agriculture can promote its own stability, aggregate real income and family welfare, consistent with concomitant progress toward these goals by other parts of the economy.

*B. Toward Greater Economic Stability**Price and Income Instability: The Problem*

Industrial capitalism is apparently peculiarly subject to progress by fits and starts, reflected in wide fluctuations in the general price level, employment and national income. Agriculture is particularly vulnerable in such an economy, because (1) it maintains production even in the face of ruinously low prices; (2) raw material prices are subject to the greatest amplitude of change; and (3) changes in agricultural income expectations are shortly reflected in land values. Agriculture's fears of a postwar deflation have already found expression in Federal legislation directing government support of agricultural prices at 90-92½ percent of parity for 2-3 years after the war's end. A feeling of economic insecurity also probably accounts, in part, for agriculture's insistence on "parity prices" during the war, even though parity embodied in its very definition the potentialities of an upward price spiral.

For proper perspective, however, we must recognize that the ghosts of deflation are likewise real to other economic groups. Labor's drive for maintenance of membership, broader unemployment benefits, barriers to technological progress and its own inflationary counterpart of "parity"—wartime wages tied to the cost of living—reflect its boom-or-bust psychology. Industry too clings to its old maxim, "charge what the traffic will bear," partly as a means of preparing for the "rainy day" of deflation, thereby hastening its coming. Thus, the most important single factor preventing the sublimation of the shortrun special advantages of all our major economic groups to the longrun common interest may be the insecurity of our unstable market economy. During the postwar period, we must give increasing attention to the optimum allocation of our human and material resources (Section C). But, so long as deflations recur, the waste of economic resources is too staggering for popular concern about such niceties as their optimum allocation, most alternative uses having already disappeared.

*Price and Income Instability: Suggested Solutions*

Important as it is to agriculture, price and income stability is fundamentally the problem of our entire national economy. Attempts at solution must, therefore, be general in scope, at least



in the first instance. Agricultural price policy can at best do no more than supplement, while avoiding conflict with, general monetary-fiscal policy.

If the objectives of economic progress and social welfare are to be realized, the Federal government must underwrite a high level of employment as continuing national policy. It must stand ready to use its taxing, borrowing and spending powers to keep the economy on an even keel, with prevention of general inflation and deflation as a major goal. Agriculture, in its own self-interest, should lend its support now to such a general system of compensatory fiscal policy—including the maintenance of necessary inflation controls during the postwar transition—as its first objective. State and local agricultural leaders should also prepare careful blueprints for rural public works for the double purpose of promoting the social welfare of agriculture (Section D) and stimulation of economic activity when unemployment threatens. Schools, hospitals, highways, river-valley development, soil conservation, reforestation, rural electrification and rural housing—in all these agriculture has a special interest and peculiar need.

Supplementary agricultural price policy should by all means avoid the mistakes of the 1930's: (1) curtailment of food and fiber marketings when consumer needs (if not effective demand) continue unchanged; and (2) price-fixing devices which prevent clearing the market at prices which the nation's consumers can better afford to pay. As a counter-cyclical device, Congress should establish an extensive system of compensatory price payments to farmers, to take effect if an index of employment falls below some specified level. The essence of this plan is (1) that market prices would be left to clear whatever supplies are put on the market (subject to an acceptable storage program<sup>1</sup>), so that consumer prices of foods and fibers would likewise fall; and (2) that agricultural purchasing power would be maintained by payments (for continued production) equal to the difference between the going market price of their product and some specified percentage of the predepression price. To minimize erratic price relationships, the predepression price should be defined in terms of (say) a three-year average just prior to the system's taking effect (Appendix B). However, compensatory payments should be agriculture's second

<sup>1</sup> Cf. below, p. 746.

line of defense. Its first line of defense (with other major groups) should be general fiscal policy by which to avoid that unemployment which will bring its own compensatory system into effect.

### *Production Instability: The Problem*

Besides the instability stemming from its interrelationships with our market economy, agriculture has certain unique instabilities of its own: (1) fluctuation in yields and total production due to the vagaries of nature; and (2) for certain farm products, production cycles which grow out of the cumulative effect of the false price expectations of millions of independent producers. Reduction of price and income instability strictly due to these production phenomena is a legitimate objective of agricultural policy which, at the same time, would better meet consumer needs.

Storage has been advanced in recent years as the solution to the first of these problems, with ameliorative features for the second problem as well. During the early 1930's, the Secretary of Agriculture—through the Commodity Credit Corporation—had full discretion to establish commodity loan rates, which were initially fixed at such levels as to hold certain farm products in storage in years of large crops and release them in years of small crops. In 1938, however, Congress began to tie minimum loan rates to the 1910-14 price relationship—52-75 percent of parity, later raised to 85 percent, then 90-92½ percent of parity. For cotton, additional limitations were imposed on the price and quantity of sales from government stocks. As a result of this shift in emphasis from stabilization to price-raising, government-owned surpluses reached unprecedented levels which, had not wartime demands intervened, would have forced a showdown by now.

### *Production Instability: Suggested Solutions*

The concept of an "ever-normal granary" is basically sound. But stocks are bound to become "ever more abnormal" unless stabilization of physical supplies is divorced from the incongruous goal of price-raising. Storage is not an effective means of counteracting cyclical changes in the price level or of avoiding necessary secular adjustments within agriculture. If the limited objective of stabilization of supplies is to be realized, Congress must establish standards of performance in physical rather than price terms.

Thus, Congress should direct the C.C.C. to take, as its standard

of storage policy (within certain specified minimum and maximum carryovers), five year *moving averages*<sup>2</sup> of the production of storable farm products (Appendix A). When, in any year, the actual production of (say) cotton exceeds the five-year moving average ending with that year, the Corporation should purchase sufficient cotton so that the aggregate increase in stocks, public and private (including stocks under loan), equals (say) 60 percent of the excess of actual production over the average. Conversely, when actual production falls short of the moving average, the Corporation should sell that amount necessary to decrease total stocks by (say) 60 percent of the production "deficit." Had this plan been applied to cotton beginning in 1929—with the proviso of a 2-million-bale minimum carryover and a maximum of 6 million—stocks would have reached 6.0 million bales in 1937 but would have fallen to 2.9 million bales, instead of the parity-bound actual carryover of 10.7 million, by mid-1944 (Appendix Table I). A similar plan could have been successfully applied to the feed grains during 1930-44 (Appendix Table II). While this storage program would promote somewhat more stable farm prices and incomes (especially if supplemented by a system of crop insurance), its divorcement from parity would prevent additional generations of maladjusted price-raising offspring.

Hogs have shown the most persistent and clearcut tendency toward production (and price) cycles. Beef cattle production may also tend to be subject to longer cyclical swings. Insofar as these cycles are related to changes in the general price level, compensatory devices previously discussed would promote greater stability, while the stabilization of grain supplies by storage would also contribute somewhat toward this end. Finally, the price uncertainty element in these production cycles could be sharply reduced by a system of forward prices (Section C below) for hogs and cattle-on-feed.

### *C. Toward an Expanding Aggregate Real Income*

#### *Resource Allocation: The Problem*

Whether by compensatory fiscal policy or other means, the attainment of a high level of employment, in a *quantitative* sense, of our economic resources is not enough. Economists must still

<sup>2</sup> The principal argument for a moving rather than a fixed base is that the former reflects upward trends in yields, such as that of corn in recent years.

ask—employment at what? In other words, how may these resources be allocated to *qualitatively* superior uses, so that the aggregate national output of goods and services may be maximized?

The time-tested answer is a sensitive pricing system, in which (1) freely-choosing consumers cast their dollar votes for the allocation of scarce resources among myriad possible uses, establishing relative differences in the remuneration of human or material resources; and (2) resources are sufficiently mobile to level such differences in remuneration whenever and wherever they appear. Fundamentally, the principal barriers to optimum resource allocation are (1) the failure of relative prices to reflect consumer choices and (2) impediments to mobility of resources from less to more remunerative uses. Before 1929, these barriers largely stemmed from the monopolistic price and tariff policies of industry. Government policy of the 1930's, dodging a frontal attack on existing barriers, chose instead the indirect approach of erecting counter-barriers on the agricultural and labor fronts.

Recent agricultural price policy has fostered the efficiency of resource allocation, both within agriculture and between agriculture and the rest of the economy, only to the extent that actual prices have diverged from the historically-based parity-price goals. Price relationships of 1910-14 represent a grossly distorted pattern of current consumer choices, grounded on far different needs and tastes than those of a quarter-century ago. Government payments to farmers and storage programs, insofar as they are tied to parity, insulate agriculture from the socially beneficent effects of a sensitive price system. Furthermore, the immobility of agricultural resources between products and areas is enhanced by the lack of correspondence between commodity and regional cost relationships of 1910-14 and today—a failing buttressed by the use of historically-based production and marketing quotas.

Parity-based agricultural price policy also tends to block necessary reallocation of resources between agriculture and the rest of the economy. Because of the relatively low price and income elasticities of consumer demand for farm products, technological progress in agriculture must, in general, result in relatively lower farm prices. Under these circumstances, adequate farm income should be maintained by a shift of resources (primarily labor) out



of agriculture. Instead, the 1910-14 base for both statutory price and income parity puts the emphasis on secular maintenance of the relative agricultural price level rather than on essential shifts in population. The sharp increase in wartime agricultural production—despite the exodus of 7,000,000 people (including those entering the armed forces) and a shortage of farm machinery—has placed this shortcoming of parity, and its portent for the future, in bold relief.

*Resource Allocation: Suggested Solutions*

Agriculture has a fundamental interest in backing measures—such as anti-trust policy directed at industry and labor alike, reciprocal trade agreements, government “yardstick” competition, and lower taxes on risk capital—which will promote private investment, a freer price system and consumer sovereignty. In such a context, however, agriculture must also be willing to give up its own restrictive price policies which bar optimum resource allocation.

The prime objective of agricultural price policy should, therefore, be the establishment of a system of relative prices which will call forth no more than the quantities of those foods and fibers for which there is an effective demand at full employment. Our wartime experiences have demonstrated both the utter irrelevance of 1910-14 price relationships and the impediments which existing parity formulas impose upon efficient resource allocation for current food requirements. Clearly, then, historical bases must go. Would a system of forward prices or free prices be the better alternative? Under forward pricing, the Department of Agriculture would set production goals for various farm products—based on anticipated consumer demand—and would announce guaranteed minimum prices at the beginning of each production period. Each forward price should be fixed at the level considered necessary to meet the production goal less a margin (say 10 percent) to allow for official errors of estimation of both absolute and relative prices.

The advantages of forward pricing are (1) its orientation toward current consumer requirements rather than anachronistic consumption pattern; and (2) the sharp reduction in price uncertainty, so timed that farmers can plan efficient resource use in meeting these

requirements. Analogous<sup>3</sup> wartime price supports—though handicapped by parity-inflated prices of less essential farm products—have enjoyed notable success in expanding essential farm production. The shortcomings of forward pricing are primarily political (Appendix C). They can be generally applied—particularly to those products requiring contraction—only given a breadth of administrative discretion which Congress is unlikely to create or, at best, long maintain.

Congress should, therefore, while abandoning historical bases generally, limit forward pricing to livestock and livestock products since (1) the future demand for meat, poultry and dairy products will be relatively favorable; (2) these products, in turn, form the principal demand for the feed grains; (3) they are relatively perishable; and (4) some of them are, because of price uncertainty, subject to uneconomic production cycles. The prices of grains, cotton and other products should be divorced from parity and allowed—within the framework of suggested compensatory and storage policies—to seek their own level in a free market. This program would enhance foreign-trade prospects and force resource adjustments for which purpose public price policy is not politically feasible, if indeed appropriate.

This synthesis of forward and free prices can accomplish all that is possible through the instrument of price. Further improvements in resource allocation—particularly between agriculture and non-agriculture—must depend on non-price devices. Thus, no conceivable price policy can solve the cotton problem. But neither is it politic nor humane to wait for freed prices to grind out necessary shifts of labor out of, and capital into, such depressed agricultural areas. Rather, public policy must—apart from transitional “relief” measures (Appendix B)—speed the mobility of excess labor out of agriculture by such positive measures as (1) maintenance of stable and remunerative industrial employment; (2) vigorous promotion of industrialization of disadvantaged regions, accompanied by extensive subsidies to raise human productivity; (3) widespread dissemination of employment information, with financial aid for moving; and (4) elimination of union barriers to entry. On the capital side, such regions should receive more favorable terms for public farm credit, based on

<sup>3</sup> These support prices, being tied to parity, are analogous to forward prices only because, during the war, prices were generally above these parity levels. Unlike forward prices, they could not be equally effective in contraction.

realistic, generously supported farm management research. Such a program, by raising labor costs and lowering capital costs in agriculture, would foster adoption of the best technology and would raise the low level of education and health by which labor immobility is perpetuated.

#### *D. Toward Greater Social Welfare*

Even in a stable, maximum-productivity national economy, problems of social welfare, although less acute, would still be with us. And our society would still choose, as it has so often done, to redistribute aggregate income, according to politically acceptable social values which modify a strict productivity basis of distribution. The raising of family incomes (including public services) which fall below present-day minimum standards of social welfare need not await the attainment of this more desirable economy. But the leveling process should at least be consistent with progress toward the goal of increasing the aggregate product available for redistribution.

Recent agricultural price policy has been primarily oriented toward the problem of unstable and low *aggregate* farm income. It has ignored the resource problem within agriculture, to which the chosen instrument of price, properly applied, could make its principal contribution. And, in limiting attention to aggregate and average (per capita) farm income, it has bypassed still broader resource problems closely related to rural poverty. One-half of the nation's farms contribute less than one-tenth of total farm-product sales. Price policy cannot, therefore, solve this economic problem. Rather, it is apt to continue to increase the disparity of agricultural income distribution. What then can be done?

Low family incomes within agriculture must be supplemented by means which will promote rather than hinder human mobility. Rural education, health, nutrition and housing—through their contributions to the vigor and productivity of a major part of our next generation—are such means, warranting generous Federal support. Once free of excess labor resources, agriculture will also have a legitimate claim to an *average* level of real family income (including the public services necessary for good living and citizenship) fully equivalent to that of comparable non-agricultural employment. In this broadest sense, "parity for agriculture" must immediately become one of our nation's foremost objectives.

## Supplementary Materials

## APPENDIX A

*Some Applications of the Proposed Agricultural Storage Policy*

It was proposed above<sup>4</sup> that, for each storable agricultural commodity, Congress should designate

(1) an operating range in terms of specific minimum and maximum carryovers;

(2) five-year moving averages of production as the criteria of storage policy within this range; and

(3) specific percentages of the excess of actual production above (or the deficit below) this average by which year-end total stocks, private and public, would be increased (or diminished) by C.C.C. operations.

Complete stabilization of supplies would require maximum carryovers so large that the costs would far outweigh the gains. It is therefore proposed that the maximum carryovers be established at levels which, though modest, would provide partial offsets to the more extreme deficits in annual production, while effectively barring an undue piling up of stocks. Moving (rather than fixed) averages have the advantage of reflecting upward trends in yields which should not be accompanied by a proportionate growth of stocks. The percentages of "surpluses" or "deficits" by which year-end carryovers are changed should be fixed at the highest levels consistent with the maintenance of maximum flexibility of storage operations within the specified range. How might these principles be applied to cotton, corn, wheat and oats?

*Cotton (Appendix Table I)*

Appendix Table I illustrates how the proposed policy would work out, tentatively assuming (1) a specified minimum carryover of 2 million bales and a maximum of 6 million; and (2) a change in year-end stocks of 60 percent of the difference between actual cotton production and the five-year moving average of production.

In August 1929, the cotton carryover was only 2.3 million bales. On August 1932, through the extensive storage activities of the Federal Farm Board, cotton stocks stood at 9.7 million. By August 1937—aided by a considerable reduction in cotton production—the carryover had been reduced to 4.5 million bales. Had the proposed storage plan been applied instead during this period, total carryover would not have risen above 3.5 million bales (August 1932) and would have stood at 2.4 million in August 1937. During 1928–36, the actual annual carryover averaged 6.2 million bales as compared with 2.3 million under the proposed plan. This difference reflects the fact that the proposed plan would have been based on a physical standard, divorced from efforts to use storage policy to hold up cotton prices in the face of a falling general price level. Nevertheless, during 1928–36, there was sufficient administrative discretion to carry out a considerable reduction in stocks between August 1932 and August 1937, at which date the actual carryover (4.5 million bales) was twice that (2.3 million) had the proposed policy been in effect.

However, with the huge cotton crop of 1937—and with subsequent

<sup>4</sup> Page 746



Congressional action tying loan rates to parity and limiting sales of government cotton stocks—the actual and proposed plans sharply diverge. Actual carryover reached a peak of 13.0 million bales in August 1939, falling only to 10.7 million by August 1944. Under the proposed plan, carryover would not have risen above 6.0 million bales (August 1938) and would have fallen to 2.9 million by August 1944. During 1937–43, actual annual carryover averaged 11.3 million bales, as compared with 4.2 million under the proposed plan. For the 15 years 1929–43, there would have been a net addition to 1928 carryover of only 0.8 million bales instead of the actual 8.4 million. Thus, the proposed plan would have been clearly superior in preventing a long-term pyramiding of stocks.

APPENDIX TABLE I. EFFECT OF ACTUAL AND PROPOSED STORAGE POLICIES ON THE AVAILABLE CURRENT SUPPLIES AND CARRYOVER OF COTTON, 1929–44  
(Thousands of Bales)

Year beginning August	Actual cotton production	5-year moving average <sup>a</sup> of production	Differences between actual and average production	Change in carryover, end of season		Amount of carryover, end of season		Amount available for current marketing	
				Proposed <sup>b</sup>	Actual	Proposed	Actual	Proposed	Actual
1928	—	—	—	—	—	2,312	2,312	—	—
1929	14,825	15,268	- 443	- 266	+2,218	2,046	4,530	15,091	12,607
1930	13,932	14,834	- 902	(- 46)	+1,840	2,000	6,370	13,978	12,092
1931	17,097	14,657	+2,440	+1,464	+3,308	3,464	9,678	15,638	13,789
1932	13,003	14,667	-1,664	- 998	-1,513	2,466	8,165	14,001	14,516
1933	13,047	14,381	-1,334	(- 466)	- 421	2,000	7,744	13,513	13,468
1934	9,636	13,343	-3,707	(0)	- 536	2,000	7,208	9,636	10,172
1935	10,638	12,684	-2,046	(0)	-1,799	2,000	5,409	10,638	12,437
1936	12,399	11,745	+ 654	+ 392	- 910	2,392	4,499	12,007	13,309
1937	18,946	12,933	+6,013	+3,608	+7,034	6,000	11,533	15,338	11,912
1938	11,943	12,712	- 769	- 461	+1,500	5,539	13,033	12,404	10,443
1939	11,817	13,149	-1,332	- 799	-2,469	4,740	10,564	12,616	14,286
1940	12,566	13,534	- 968	- 581	+1,602	4,159	12,166	13,147	10,964
1941	10,744	13,203	-2,459	-1,475	-1,526	2,684	10,640	12,219	12,270
1942	12,817	11,977	+ 840	+ 504	+ 17	3,188	10,657	12,313	12,800
1943	11,427	11,874	- 447	- 268	+ 87	2,920	10,744	11,695	11,340
1944	12,228	11,956	+ 272	+ 163	—	3,083	—	12,065	—
Sum or average 1929–44	12,942	13,307	-5,852	+ 771	+8,432	3,312	8,863	12,893	12,427

<sup>a</sup> Ending with the current year.

<sup>b</sup> The figures in this column represent 60 per cent of the difference between actual production and the moving average, except that the figures in parentheses represent the smaller changes of carryover necessary in order to maintain a minimum carryover of 2 million bales and a maximum of 6 million.

But what would have been the extent of stabilization of annual cotton marketings under the proposed plan? During 1929–36, the range in annual production was 178 per cent. Storage policy reduced the range in annual marketings to 143 percent, as compared with 162 percent had the proposed policy been in effect. Conversely, the range in actual carryover (214 percent) was considerably greater than that (173 percent) under the proposed plan. However, during 1937–43, the proposed storage policy would have stabilized the range in annual marketings slightly more than the actual plan—131 percent instead of 137 percent, the range in annual production being 176 percent. In this latter period, the proposed storage policy would have been more flexible, with a range in carryover of 205 percent as compared with the actual range of 123 percent.

APPENDIX TABLE II. EFFECT OF PROPOSED STORAGE POLICY ON THE AVAILABLE  
CURRENT SUPPLY AND CARRYOVER OF CORN, WHEAT AND OATS, 1930-44  
(Millions of bushels)

Year	Corn				Wheat				Oats			
	Actual production	Difference between actual and average production <sup>a</sup>	Proposed		Actual production	Difference between actual and average production <sup>a</sup>	Proposed		Actual production	Difference between actual and average production <sup>a</sup>	Proposed	
			Change in carry-over <sup>b</sup>	Amount available currently			Change in carry-over <sup>b</sup>	Amount available currently			Change in carry-over <sup>b</sup>	Amount available currently
1929	—	—	—	136	—	—	—	289	—	—	—	154
1930	2,080	507	(0)	2,080	886	+20	+15	304	1,275	+86	+64	1,211
1931	2,576	18	(0)	2,576	941	+53	+40	344	1,124	+60	+45	1,169
1932	2,931	258	+129	2,802	756	-110	-82	262	1,255	+39	+29	1,226
1933	2,400	207	(-115)	2,515	552	-301	(-162)	100	736	-456	(-102)	838
1934	1,461	-1,175	(0)	1,461	526	-232	(0)	100	544	+674	(0)	544
1935	2,304	948	(0)	2,304	688	-85	(0)	100	1,210	+14	+10	1,200
1936	1,507	-1,038	(0)	1,507	680	-5	(0)	100	793	+439	(0)	803
1937	2,651	199	+100	2,551	874	+210	+157	257	1,177	+16	(0)	1,177
1938	2,562	56	+28	2,534	920	+204	+128	385	1,089	+70	(0)	1,089
1939	2,602	72	+36	2,566	741	-18	-13	372	938	+150	(0)	938
1940	2,462	107	+80	2,542	813	-17	+13	385	1,245	+128	+96	1,149
1941	2,676	94	+47	2,629	943	+66	(+)	400	1,181	+51	+38	1,143
1942	3,132	452	+226	2,906	974	+25	(+)	400	1,350	+185	(+116)	1,234
1943	3,034	249	+125	2,909	856	-25	-19	389	1,144	+32	-24	1,108
1944	3,323	313	+156	3,072	1,109	+174	(+)	400	1,166	+51	-38	1,204
Sum or average 1930-44	2,507	-1,607	+632	2,464	809	+63	+111	287	1,083	-1,413	+134	1,074

<sup>a</sup> "Average production" is a 5-year moving average, ending with the current year. Years in which corn yield fell below 21.4 bushels, wheat yield below 11.4 bushels, oat yield below 23.8 bushels, were omitted from the average.

<sup>b</sup> For corn, the proposed change in carryover equals to 75 per cent of the difference between actual production and the moving average, when the latter is larger; 50 per cent of that difference when actual production exceeds the average. For wheat and oats, the proposed change in carryover is 75 per cent of the difference between actual and average production. Figures in parentheses represent departures from this general rule to keep carryovers within the following range: corn, 150-850 million bushels; wheat, 100-400 million; oats, 100-350 million.

*Corn, Wheat and Oats (Appendix Table II)*

The feed grains offer a much more perplexing stabilization problem than cotton. Not only are they subject to much wider fluctuations in yield but a period of successive years of either very poor or very good years is not uncommon. Appendix Table II shows how the proposed storage policy would have worked out for corn, wheat and oats, assuming, for illustrative purposes, (1) operating ranges of 150–850 million bushels for corn, 100–400 million for wheat and 100–350 million for oats; (2) five-year moving averages in which years with yields less than 80 percent of the 1900–29 average yield are omitted from the moving average; and (3) the percentage of “surpluses” of actual over average production added to total carryovers is 50, 75 and 75 percent for corn, wheat and oats, respectively; the percentage of “deficits,” counteracted by withdrawals from storage, a uniform 75 percent for all three grains.

The proposed ranges in total carryover may be compared with the following actual ranges in carryover during 1930–34: 65–694 million bushels for corn; 83–632 million for wheat; and 79–281 million for oats. Since the major purpose of the moving average is to reflect trends in yields, the omission of years of extremely low yields is necessary if the average is not to be unduly distorted for this purpose. During 1866–1944, yields of less than 80 percent of the long-time average occurred only 6 times for corn (3 times in the early 1930's), 5 times for wheat (once in the 1930's), and 8 times for oats (3 times during the 1930's). It will be noted that, while the percentages of “surpluses” and “deficits” are equal for wheat and oats, they are not equal for corn. The frequency distribution of annual yields is reasonably symmetrical for wheat and oats, but is skewed toward higher yields for corn. For this reason, it is suggested that, when actual corn production falls short of the moving average, 75 percent of the “deficit” be made up from carryovers; when actual corn production exceeds the moving average, only 50 percent of the difference should be added to carryovers.

Had the proposed storage policy been put into effect in 1930, the severe droughts of the next few years would have prevented the building of adequate storage stocks. The favorable yields of 1937–44 would, however, have brought total carryovers in mid-1945 (the war apart) to 788 million bushels of corn, 400 million bushels of wheat and 288 million bushels of oats. Had it been possible to start with these carryovers at the end of the 1929 crop-years, application of the proposed plan would have contributed 349, 512 and 219 million feed units (in bushels of corn-equivalent) in 1930, 1933 and 1934, respectively. There would still have been no storage stocks available for 1936 unless they had been taken out of our minimum carryovers, which step might have been desirable under the circumstances. Reduction to actual minimum carryovers of mid-1937 would have freed another 114 million feed units during 1936.

Thus, the longer the series of bad years, the less the contribution the proposed program could make to stabilization. The same holds for the recent series of good years, during which all three grains reached or approached the suggested limits on carryover. However, the writer does not

consider the far greater maximum carryovers necessary to bring additional stabilization worth the rapidly mounting costs of storage which they would involve. Furthermore, the past few years have seen an upward trend in yields resulting in part from technological progress in agriculture (particularly the general adoption of hybrid corn and better strains of oats). To stabilize grain supplies and prices fully by storage policy would prevent the economic adjustment of feeding practices, livestock-product prices and grain acreage which should be the heritage of a lower cost of grain production.

## APPENDIX B

### *Making the Postwar Transition to a Sounder Agricultural Price Policy*

The principal components of a sound agricultural price policy proposed in the main paper were (1) a counter-cyclical system of compensatory price payments to farmers;<sup>5</sup> (2) a storage policy based on physical rather than price criteria (Appendix A); (3) a synthesis of forward and free prices, divorced from present "parity" standards, for meeting production needs.<sup>6</sup> However, space did not permit discussion of the means for making the transition from present agricultural price policies to these more appropriate policies.

At the present time, Congress has committed the government to support agricultural prices at 90-92½ percent of parity for as much as three years after the war ends. These commitments should be fulfilled but obviously should not be extended further into the future. If the compensatory payment plan were put into effect immediately, and if employment fell below the legislatively-specified level shortly after the war ends, the suggested predepression base would freeze abnormal wartime price relationships. Important structural adjustments within agriculture during the postwar transition would be hindered thereby. While present commitments would contribute little more to these adjustments, the prevention and amelioration of deflation should, at any rate, take precedence over resource allocation in such an undesirable contingency. It appears more likely, however, that the transition will be one of incipient general inflation. Under these circumstances, the groundwork for the proposed storage policy and combination of forward and free prices (subject to the continuation of general price ceilings) should be laid within the limits set by existing commitments.

With nearly 11 million bales of cotton on hand, the proposed storage policy should be enacted to take effect when cotton carryovers have been reduced to (say) 3 million bales. With prompt action by Congress, this process of liquidation can be satisfactorily completed during the next two years. Present excessive supplies should be thrown on the market for what they will bring, the difference between actual market prices and 92½ percent of parity being made up, on current marketings, by direct government payments to cotton producers. There is sufficient pent-up effective demand in clothes-hungry Europe to absorb a large part of present world stocks

<sup>5</sup> Above, pp. 745-746.

<sup>6</sup> Above, pp. 749-750.

without the usual retaliatory aspects of dumping. This program should be supplemented, insofar as necessary, by outright gifts for European and Chinese relief.

It now appears likely that we will end the war with carryovers of corn approaching the minimum of our suggested operating range (Appendix A). Due to the high priority of wheat as a war-relief food, wheat stocks too should be very low by the war's end. At that time, our proposed storage program could, therefore, be instituted immediately for these important grains. Like cotton, both corn and wheat should (apart from the limited storage program previously described) be allowed to establish their free price levels, the government making good on present postwar commitments by paying grain farmers the difference between the free price and 90 percent of parity. In this way, wheat prices would be allowed to fall to a level permitting the extensive use of wheat as livestock feed. From now on, feed demands should take over the place once filled by exports as the "safety valve" of wheat production in excess of nearly constant domestic food needs.

Congress should enact now the suggested system of compensatory payments, forward prices for livestock and dairy products and free prices for cotton and the feed grains, to take effect when present postwar parity-support commitments have expired. This step should be accompanied by the non-price devices suggested for promoting mobility of resources and social welfare in the South and Great Plains. It is recognized, however, that the shortrun immobility of specialized resources cannot (even with such public aid) be counteracted with sufficient dispatch to prevent transitional economic hardship in these regions. Hence, this adjustment to free prices should also be implemented by temporary subsidies, tapering off—according to a pre-established plan—over a 5 to 10 year period. Where possible, these subsidies should be "incentive" payments to speed necessary diversion of agricultural resources. Otherwise, they should be outright cash subsidies, completely separated from market prices and clearly labelled "for relief purposes." The prevailing view among producers, that any extra income obtained through market prices (however enhanced by government policies) is "earned," must be dissipated if optimum resource adjustment is to be realized.

## APPENDIX C

### *An Addendum on Politics*

Existing agricultural policy is based on a keyhole view of our national economy. A more farsighted and comprehensive outlook is essential if an integrated agricultural policy is to be effectuated. What are the political impediments to such an outlook and how might they be overcome?

Underlying, and strengthened by, current agricultural legislation is much irrational but politically-powerful folklore. Agricultural fundamentalism has come to identify the broad and generally valid socio-political "parity principle" with a specific discriminatory legislative "parity formula." Not only is agriculture considered so "basic" as to be the keystone to the over-all national welfare, but certain farm products have been singled

out as "basic," however differently current consumer demands might decree. A meaningless distinction has been drawn between those subsidies which operate through market prices and those which do not. Indifference or even open antagonism to problems of industrial labor and the consumer has been a by-product of these narrowly circumscribed attitudes, which have barred subordination of agriculture's special interests—whether economic, regional or political—to the all-important national interest. All of these attitudes have found ready acceptance in the halls of Congress. The predominance of rural interests, particularly in the Senate and on the important agriculture committees; the political strength of certain farm products, notably cotton and wheat; and the increasing polarization of labor policy in the Executive branch and of farm and food policy in Congress—all these have stood in the way of integrated general economic policy.

Defects of present governmental machinery have, in turn, helped to shape and give impetus to these unsatisfactory attitudes. Congress lacks the organization for comprehensive and coordinated policy-making. The present committee system disperses responsibility in a way that hinders the development of legislative leadership and the adoption of a constructive and consistent over-all legislative program. The membership of such important committees as those on agriculture and labor is so strongly interest-bound as to lack the moderating influence of other points of view. The seniority rule, inadequate technical assistance and the tools for constructive legislative control of administrative discretion have brought additional weaknesses. The Executive branch has, in turn, suffered from major defects in its administrative machinery—serious overlapping of functions, too vague a delegation of authority. The Executive departments too have tended to be interest-bound, with an absence of effective interdepartmental coordination. Finally, channels of cooperation between the legislative and executive branches have not been sufficiently formalized.

On the basis of recent experience with existing governmental attitudes and machinery, what of the political feasibility of our suggested changes in agricultural policy? However great its defects on economic grounds, existing statutory "parity" is so well entrenched as a socio-political symbol as to warrant considerable pessimism about the prospects of its abandonment. The political advantages of the present "parity formula" are its simplicity, its objectivity as a standard of administrative performance, and its emphasis on the instrument of price in attaining agriculture's goals. "Parity"—in the broader but generally valid marginal-productivity and social-welfare senses which we have expounded—is at best much more intangible, more subjective in its application, and more indirect in its effects. Nevertheless, it could be made more palatable politically through objectification in terms of rates of return to resources and minimum physical standards of health, nutrition, housing and education.

It is difficult to see why there should be strong opposition in Congress to our suggested system of compensatory price payments. Here, the danger would appear to be a myopic view of the broader policy question of maintenance of full employment in which all economic groups have a common



interest. Here, Presidential leadership—based upon comprehensive inter-departmental planning—is essential. But the superior fact-finding resources of the Executive must be combined with the political consent of Congress. In the last analysis, Congress must reconcile conflicts of special interests, but the President's role of moderator must be vigorously used to prevent a compromise at the level of the least common denominator of such interests.

If such broad decisions are to be—as they should be—the *joint* policy of both branches of government, Congress could facilitate matters by forming a Joint Committee on Postwar Economic Policy and Planning from the present House and Senate special committees<sup>7</sup> operating under that name. This Joint Committee should maintain continuous official liaison with the major standing committees of each house,<sup>8</sup> the President and his principal cabinet officers. Its major purposes should be (1) the development of coordinated and integrated national economic policy, an impossible task under the narrow specialization of existing standing-committee organization; and (2) the maintenance of harmonious Congressional-Executive relationships by which the "separation of powers" may be bridged.

Our synthesis of forward and free pricing is likely to face two major political barriers: the strength of cotton and wheat interests in Congress and Congressional interference with the administrative discretion necessary for forward pricing to work. We have suggested forward pricing only for livestock and dairy products, which are least favored by the present parity standard. Because of their brighter future, these products are least likely to suffer undue price-raising pressure on administrative price decisions. Cotton and wheat, on the other hand, have benefited most from existing parity, reflecting their political strength, particularly in the Senate and its Committee on Agriculture. Therefore, the suggested substitution of free pricing and non-price storage policy for present parity-based prices and storage faces tremendous political obstacles so far as these so-

<sup>7</sup> Representative Colmer (Miss.) is chairman of the House committee; Senator George (Ga.) is chairman of the Senate committee.

<sup>8</sup> The Colmer Committee has 18 members, of whom 4 are also on the Agriculture Committee, 3 on Ways and Means, 2 on Interstate Commerce, and one each on Rules, Judiciary, Appropriations, Naval Affairs, Labor, Banking and Currency, Patents, Merchant Marine, Irrigation and Reclamation, Indian Affairs, Mines, Public Lands, Roads, and Rivers and Harbors. Except possibly for labor, this would appear to be a rather representative cross-section of post-war economic problems. Six members are from the Northeastern states, 4 from the South, 5 from the North Central states and 3 from the Western states. The average years of service per member is 10 years, the average number of committees per member 2.7.

The George Committee has 10 members, of whom 6 also sit on the Finance Committee, 6 on Foreign Relations, 4 on Patents, 3 on Interstate Commerce; 2 each on Banking and Currency, Commerce, Appropriations, Military Affairs, and Labor; and one each on Judiciary, Agriculture, Roads, Indian Affairs, Irrigation and Reclamation, Public Lands, and Public Buildings. Two members are from the Northeast, 3 from the South, 3 from the North Central states, and 2 from the West. The average years of service per member is 12.4 years. This committee would appear to be somewhat less representative than the House committee. Its very important work is further handicapped by the fact that its members serve on an average of 6.9 committees each.

called "basic" commodities are concerned. These same obstacles would appear to assure the unworkability of forward pricing if applied to such commodities.

It is not too much to hope, however, that Congressmen from the cotton and wheat states might be convinced that their constituents would benefit most of all from the suggested non-price means of attaining greater mobility of resources and a higher level of social welfare in agriculture—problems which the instrument of price cannot effectively solve, in either a shortrun or longrun context. Realization of this fact might be hastened if the President would create commissions—composed of leading Congressmen, cabinet officers, social scientists and lay leaders—to draw up long-range socio-economic legislative programs for the rehabilitation and development of the South and Great Plains, our major problem areas.

Finally, the existing Joint Committee on the Organization of Congress could greatly advance the attainment of an integrated national economic policy by (1) a marked reduction in the number of standing committees in each house; (2) making their functions parallel with each other and (when they become clear) with the main postwar divisions of the Executive branch; (3) modifying the present seniority rule and special-interest pattern of committee membership; and (4) providing more adequate technical assistance for both Congress and its committees. A special effort should be made to get a suitable balance of special interests—regional; urban and rural; farm, labor and business—on each committee. The wartime record of the better-balanced Banking and Currency Committees has been superior—in matters of farm and food legislation—to that of the interest-bound Agriculture committees. The present Agriculture committees need to be broadened by a better distribution of commodity interests and the addition of more representatives of urban constituencies. Similarly, the Labor committees require a stronger representation of Congressmen from rural areas.

American democracy cannot forever survive its traditional policy of "muddling through." Comprehensive and broadly-conceived policy-making must yet become the rule, piecemeal and special-interest policy-making the exception. The shadows of the corporate state will not be wholly dispelled by the military defeat of our Fascist enemies. Just as necessary is the substitution of cooperation for retaliation within the ranks of our own political and economic life. In this process of strengthening the democratic way, agriculture will continue to play a leading role on the national political stage. Is it not, therefore, high time that it stop "muffing its lines"?

*The Second Award Paper*

A PRICE POLICY FOR AGRICULTURE, CONSISTENT  
WITH ECONOMIC PROGRESS, THAT WILL  
PROMOTE ADEQUATE AND MORE  
STABLE INCOME FROM FARMING

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THE TITLE suggests three broad goals for agricultural policy. These goals place appropriate emphasis upon the significant problems of agriculture for which solutions are required.

*I. Implications of the Goals*

The first goal, economic progress, emphasizes the necessity of using agricultural resources efficiently. Ignoring certain qualifications, maximum efficiency of resource use requires that each resource be used where its remuneration is a maximum. At any given time the resources employed in agriculture must earn no more or less than could be earned in other pursuits. The returns to comparable resources must be the same on each farm. Maximum efficiency of resource use, assuming competition, is achieved only if each farmer receives the maximum possible net income.

In exploring the causes for failure to attain maximum resource efficiency, the problem may be divided into the three categories indicated above: (a) Between agriculture and the rest of the economy; (b) among farms, and (c) within farms.

The evidence showing misallocation of resources between agriculture and the rest of the economy is the low relative return to many farm laborers and the high relative returns on capital in much of agriculture. The low labor returns in agriculture, an expression of excess labor supply, result from the necessity of a continuous migration from agriculture and impediments to movement. Farm migration is required by high farm birth rates and rapid advances in technology, combined with very slow growth in demand. The deficit of capital in agriculture rests on low farm incomes which prohibit large savings despite a high rate of saving and capital rationing and risk aversion resulting from uncertainty in agriculture.

The great differences in earnings in agriculture, particularly as reflected in regional differences not attributable to individual

managerial qualifications, indicate output could be increased by transfers of resources within agriculture. The differences in farm sizes and resource productivity are outgrowths of labor immobility within agriculture, of credit institutions favoring those in the best capital position, and to long run factors which affect labor productivity (inadequate education, nutrition, housing).

The individual farmer is confronted with many difficulties in maximizing income. A significant factor is the poor guide free market prices provide for resource allocation. Agricultural production takes time; accurate estimates must be made of future prices or income will suffer. Farmers basing production decisions on current prices usually find little relationship between such prices and the prices at time of harvest or sale. Other farmers follow fixed programs, making no attempt to estimate short run price movements. Further, the uncertainty of prices leads farmers to reduce their demands for capital, to buy too small farms, and to place great emphasis upon labor. Credit institutions reinforce at the same points. Income uncertainty places the farmer using borrowed funds in an extremely vulnerable position.

The second goal, adequate income, means an income to farm families sufficient to permit a minimum scale of living consistent with our social values. The goal implies that in a democratic society an interest exists in the well-being of all citizens. Individuals should have an opportunity of employment at useful pursuits, an implication of the resource goal. In addition, special assistance should be given families unable to earn necessary minimum incomes. In an expanding economy the main causes of inadequate incomes are physical and mental abnormalities, impediments to mobility, and the ownership and control of inadequate resources. In many agricultural areas, there are too many people to provide families an adequate income. Here mobility is the main solution. In other circumstances, families have inadequate labor power and capital resources, both being augmentable.

The third goal has two significant implications. First is the desirability of stabilizing farm income in the aggregate. Net or gross farm income fluctuates over wide ranges during the business cycle. This fluctuation is undoubtedly a reinforcing factor in the cumulative aspects of deflation and inflation. Low farm incomes during depressions lead to serious problems of soil deterioration, exploitation of human resources, a reduction in education, and

general social and political deterioration. The wide variability of farm incomes comes from outside agriculture. Aggregate agricultural output is remarkably stable.

Accompanying the instability of total income are forces impinging upon individual farmers. Farmers are subject to income uncertainties unrelated and in addition to aggregate income variations. Prices of a particular product fluctuate independently of the general trend. Yields of crops and livestock products vary from farm to farm. Feed prices and livestock products do not move in unison, resulting in losses at times and large profits at others.

## *II. A Suggested Price Policy—Forward Prices*

A price policy making significant contributions toward achieving the goals must accomplish two tasks:

1. Provide the best possible estimates of future prices that reflect prospective demand and supply conditions;
2. Reduce and transfer much of the price uncertainty confronting farmers to the economy as a whole.

Both tasks can be accomplished by forward prices. Forward pricing places the responsibility of formulation of price expectations upon a group of experts rather than upon several million inadequately equipped farmers. Forward prices transfer, and in the process reduce, price uncertainty by permitting formulation of more accurate expectations and by the combination of risks.

Forward prices require the following types of action by an administrative agency:

1. The estimation of expected prices reflecting the best allocation of resources among agricultural products, given prospective supply and demand conditions.
2. Have available necessary steps assuring the forward prices, which would be some fixed percentage (90 to 95 percent) of the expected price.
3. The announcement of forward prices prior to making of production plans.
4. An extension of the forward prices for a time sufficient to permit completing production plans.
5. The specification of appropriate grade, seasonal and location differentials.

During periods of high employment the only criterion for establishing forward prices is an equilibrium concept. The forward prices should reflect prospective demand and supply conditions. To do otherwise distorts and impedes allocation of resources and either reduces agricultural income or forces subsidization of agricultural production. Making forecasts of expected prices is a difficult task. In itself this is an argument for forward prices since such estimates must be made. Farmers have insufficient time and data available to permit deriving accurate estimates. Making the job the responsibility of experts would provide more accurate reflections of future prices. In reality, the difficulties of price formulation are reduced by its concentration. Individual farmers must not only estimate prospective demand conditions, but must also estimate two other imponderables—the vagaries of Nature and the actions of other producers. Through storage most of the effects of yield variations on prices of feed grains, livestock and other durable products can be eliminated. An individual cannot readily interpret how other producers will react to an uncertain situation, while supply responses to rather certain prices can be more readily evaluated.

It is extremely important that measures used to assure forward prices be consistent with resource efficiency and interfere as little as possible with normal movement of product from farmer to consumer. Techniques used in the past may be criticized on both counts. Production control, minimum market prices, price discrimination and dumping are not appropriate techniques. Neither is a storage program used to raise prices over a period of time and price products out of markets, as occurred with cotton and wheat.

Reliance should be placed on two techniques—supplementary price payments and storage.<sup>1</sup> The supplementary payments would equal the difference between the market price and the forward price. Because of possible errors in forward prices, the forward price should be slightly below the estimated equilibrium price. For perishable crops a schedule of prices varying inversely with yields should be used rather than a fixed forward price. The expected price would be based on anticipated acreage and an average yield.

<sup>1</sup> An additional technique is subsidized consumption for low income groups. The main objective of this program should be to improve nutrition and not "surplus disposal." As a consequence, unless nutrition goals are distorted, the major contribution would be to stabilize demand for all foods and not to maintain prices of particular foods as required by forward prices.



Producers would be guaranteed a specified total income from the crop. This modification is required to reduce the subsidy expenditure, but would not reduce the income certainty of the individual farmer. Supplementary payments would not be required for durable products that are further processed by farmers; they need not be used for cotton and tobacco.<sup>2</sup>

Supplementary payments can be made within a simple administrative procedure. Forward prices would be established by geographic areas, with differentials based on usual market relationships. The forward price would be stated in terms of average local market prices. Payments would be made in an area when average local market prices were below the forward prices, the payment equaling the difference. Each producer in the area would receive the same payment, regardless of the specific price received. Producers would find it advantageous to find the best market and to produce the most economical quality. Seasonal differentials could be introduced by using a schedule of slowly graduated prices. The only evidence needed by the farmer would be proof of sale and time of sale if seasonal differentials were used.

A storage program is required for the functioning of a forward price system. Important inefficiencies in resource allocation result from the failure of free markets to withhold stocks when production is large and to make supplies available when yields are small. Fluctuations in hog production, for example, are closely related to variations in corn supplies.

The storage program should encompass feed grains, wheat, cotton and tobacco. The function of the storage program should be to improve the distribution of supplies in time and not to raise the average level of prices through time. The complete stabilization of supplies in time should not be attempted. Since storage has certain costs, storage should not go beyond the point at which marginal costs exceed the marginal returns. Because the distribution of crop yields are not symmetrical, complete stabilization could result in accumulating storage stocks equal to an annual production for some crops.

Rules can be established for a storage program which will prevent its use as a price raising measure and the accumulation of unusually large stocks. First, the estimated equilibrium price

<sup>2</sup> It is assumed that significant proportions of the wheat crop will be used for feed in the future.

would be based on an expected yield which reflected trends in yields. Second, the actual forward prices would be set above and below the estimated equilibrium price. The lower price would be a buying price and the upper a selling price. The range would permit the government to recoup the storage costs and prevent storage operations when crops varied only slightly from the trend yield. There is little reason to store or sell from stocks, except to meet regional deficits, when crops are only moderately larger or smaller than the trend production. Third, an upper limit on storage stocks could be set, which if equaled or exceeded would require mandatory reductions in prices for the next crop year. This would essentially require that in establishing the forward price for the next year, the excess of stocks over the maximum would have to be added to expected production. Though this procedure might not immediately reduce stocks because a large crop might follow, it would limit the size of stocks to manageable proportions and provide an orderly procedure for stock reduction.

Timing—the announcement of forward prices and their time span—is an important problem in forward pricing. The underlying determinant is the production period—a period permitting a significant change in production. For crops the problem is clear cut; the production period is the time required for planning, planting, harvesting and marketing or a year. Hogs have a production period of approximately 16 months. There is no sharp break in dairy production, nor no well defined production period in the usual sense. However, changes of 3 or 4 percent in production can be achieved in 12 to 15 months. Beef cattle present somewhat more difficult, but not insoluble, problems. Forward prices for beef cattle should cover three categories—cows, fed cattle, and feeder cattle. By doing this the time span of forward prices could be limited to about 15 months. The forward prices should be announced in advance of planning operations and simultaneously for products competing for the same resources.

### *III. Forward Prices in a Depression*

Agriculture may follow one of two roads in gaining stable income. One is to copy industry and adapt total output to changes in total demand. This policy, inconsistent with the general welfare, would probably be of little aid to agriculture. Agricultural costs are only moderately responsive to changes in output and the in-

crease in income would be small. The other is to work for suitable monetary-fiscal policies, with provision for maintenance of farm incomes by direct means if depressions are not avoided.

Agricultural income can be maintained during depressions in a way consistent with a general monetary-fiscal policy, without disrupting marketing procedures and the allocation of resources. The method is that of compensatory payments. During a depression period, which could be defined in terms of unemployment, forward prices would be established not on the basis of equalizing supply and demand, but in terms of maintaining agricultural income at some specified level. The difference between the forward price and the market price would be paid to farmers as a compensatory price payment, following the same administrative procedure as outlined for supplementary payments.

At what level should the depression forward prices be established? This is an economic and political question. The prices should not result in an income high enough to attract labor resources back into agriculture but prices must be sufficiently high to prevent soil depletion, human exploitation and bankruptcy. The assurance given to farmers should have some relevance to unemployment compensation, because of equity and to prevent return of labor. The minimum net farm income might be established at 75 percent of the average income for the two preceding non-depression years and the average level of forward prices determined to assure this income. This procedure would reflect changes in the prices of cost items. The individual forward prices would be established on the basis of the relative prices which would prevail under high employment. If the depression is short lived, the forward prices for the preceding non-depression year could be used. However, a long depression would soon outmode these price relationships and provision should be made for adaptation.

Compensatory payments, as outlined, tend to be regressive in their incidence. Farm people making only modest sales would receive very small payments, yet their small cash expenditures are probably more stable than those of the larger commercial farmer. Two solutions are possible. One is a program for assuring every family in the economy sufficient income to provide a minimum budget. The other is to establish a minimum compensatory payment for each family member of all bona fide farmers not receiving other forms of governmental compensation or retaining off-farm

employment. This payment should be modest, perhaps \$20 per year per family member, and would be in lieu of the price payments for all families who would receive less than this amount from price payments.

#### *IV. The Transition From War to Peace*

Present legislation requires price guarantees of 90 percent of parity for many agricultural commodities for as long as three years after the end of the war. One may question the desirability of the guarantee and recognize the difficult problems created. However, a commitment has been made by the government to farmers. To fail to meet the commitment will make extremely difficult the establishment of the necessary trust and confidence in government required as a basis for national economic policies. The commitments should be fully met. "Administrative meddling" with the content of the guarantee in order to reduce its effectiveness will result in an unacceptable political situation leading to future restrictive legislation making adequate administration of farm programs impossible.

The significant problem now is to devise techniques of meeting the commitment with the minimum of economic dislocation. The best procedure is to permit market prices to seek their level and to pay producers the difference between the guarantee and the market price. The money cost of this procedure will be large; the real cost to the nation will be the smallest possible.

#### *V. Conclusion*

Price policy represents a powerful tool, but its limitations must be recognized. In the past, labor mobility has not responded to relative movements of farm and non-farm prices as might be expected. At high relative farm prices many farm families receive incomes lower than obtainable elsewhere. Alternative employment opportunities are meager when low farm prices prevail. Price policy cannot eliminate inadequate incomes. Only to a limited degree are the continuing inadequate agricultural incomes due to farm price behavior. Finally, stability of individual farm income depends on yield fluctuations as well as price.

Parity prices, based on historical relationships, reduce the effect-

iveness of price policy: Parity prices generally mean higher prices, an obviously inappropriate remedy for inadequate incomes. Parity prices impede necessary resource adjustments, as illustrated by wheat and cotton. The departures from parity required to expand fats and oils and livestock production during the war indicates strikingly the shortcomings of parity prices in obtaining suitable resource allocation. Establishing prices as goals leads to clogging of markets and pricing a product out of domestic and foreign markets.

Any price policy must be supplemented by certain conditions and policies if the goals of this paper are to be achieved. These conditions and policies are:

1. An expanding industrial economy to provide outlets for excess farm labor.
2. A strong monetary-fiscal policy to prevent depressions and its associated backlog of excess labor in agriculture.
3. Direct measures to improve labor mobility because mobility is slow even under excellent employment opportunities. A labor outlook, direct incentives to mobility, and appropriate location of new industrial development would be helpful.
4. A generalized crop insurance program to eliminate part of the effects of weather on the income of the individual farmer.
5. Direct measures to improve labor productivity and capital resources of many farm families is required. Steps should be taken to provide families with socially accepted standards of nutrition, health and education. A credit and managerial assistance program should be used to increase capital resources controlled by many farmers.

#### APPENDIX NOTE A

The difficulties confronting farmers in deriving price expectations may be indicated by analyzing the results obtained by using simple methods of estimating future prices.

A method of estimating prices for the next production period which many farmers apparently use, at least approximately, is that the present price will continue to prevail. The errors involved in using this method are indicated in the following tabulation for nine farm products:<sup>1</sup>

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<sup>1</sup> The period covered was 1910 to 1943.

	Average absolute error	Mean of index	Percentage of mean	No. of years error greater than 10%
Corn	26	123	21	23
Hogs	24	120	20	22
Beef cattle	17	122	14	18
Wheat	22	121	18	21
Potatoes	48	139	35	29
Poultry	17	147	12	16
Eggs	17	125	14	19
Cotton	27	126	21	25
Butterfat	18	132	14	19

The errors average from 12 to 35 percent of the mean price for the period. In only one case (poultry) was the error less than 10 percent more than half the time (16 out of 34). The writer has tested other simple methods of estimating future prices and no one is consistently superior to assuming that the present price will continue. If farmers can make no more accurate estimates of future prices than this, important misallocation of resources must occur and uncertainty must be very important.

#### APPENDIX NOTE B

A forward price that is independent of the actual yield during any year results in a fluctuating income from the national output. For this reason it is sometimes believed that forward prices or loan rates should be varied in order to stabilize the total value of a crop. For perishable crops using a forward price schedule instead of a fixed price a small range is desirable because storage has no function in such cases and the schedule is the only way to avoid subsidy expenditures when high yields occur. Subsidy expenditures resulting from such yields perform no useful purpose and should be avoided.

Where storage is possible certain net social gains are possible which would be dissipated if the total value of a crop were stabilized. Under certain circumstances, if stability were achieved stocks would accumulate from small crops and sales from stocks would occur when a large crop occurs. Even where this situation would not prevail, a storage program would be ineffective in stabilizing the supplies of a crop through time and fluctuating livestock supplies at least as large as in the past would occur.

The main question which we are considering here, however, is this: Would stabilizing the total value of a crop against yield fluctuations add stability to the income of the individual farmer? The answer is in the negative. The crop yield on any individual farm has very little relationship to the national yield. A national yield is the average of yields from several thousand to several million producers. The change in the national yield from year to year reflects only average changes. When the national yield increases, many farmers will actually have lower yields, while others will have a much larger increase. The yield on an individual farm, and the change of that yield through time, is due to many factors, only a few hav-



ing significance in their effect on national yield. Even a cursory examination of state yields indicates marked year to year variations for most states. For individual farmers divergent and unrelated variations are much greater.

If stabilizing the total value of a crop were to completely stabilize the income of an individual producer, the yield of the individual producer would have to vary proportionately with the national yield through time. Perfect correlation alone is insufficient, since perfect correlation is consistent with variations that are not proportional. This last point can be best seen by examples, given in the following tabulation.

National yield	Price <sup>1</sup>	Price <sup>2</sup>	Case A <sup>3</sup>			Case B <sup>4</sup>		
			Yield	Income <sup>5</sup>	In- come <sup>6</sup>	Yield	Income <sup>5</sup>	Income <sup>6</sup>
20	1.25	1.00	20	25.00	20	38	47.50	38.00
25	1.00	1.00	30	30.00	30	40	40.00	40.00
30	.83	1.00	40	33.32	40	42	34.00	42.00
				88.32	90		121.50	120.00

<sup>1</sup> Price required to stabilize total value.

<sup>2</sup> Price independent of actual yield.

<sup>3</sup> Yield in Case A is  $-20 \div 2$  (national yield).

<sup>4</sup> Yield in Case B is  $30 \div 4$  (national yield).

<sup>5</sup> Income per acre if total value of national crop stabilized.

<sup>6</sup> Income per acre if price is independent of national yield.

Two examples are shown. In both cases perfect correlation between the individual farm yield and the national yield is assumed. In neither case would the individual producers have a stable income from year to year, assuming no change in demand conditions. In one case (B) the producer's income would be more stable with a fixed than a varying price.

The assumption of perfect correlation is obviously invalid. The following table gives results of some calculations made for the period 1903 to 1939. Since individual farm data were not available, county and state data were used. The results achieved overestimate the possible reduction in income variations which an individual farmer would have received since the assumption would have to be made that individual yields changed proportionately with the county or state yields. Corn and wheat were chosen because county data were available for the two crops for the whole period. Analysis of state yield data on other crops indicates that similar results would have been obtained. The counties were selected at random, after stratification, from Iowa and Kansas.

The calculations in the table are based on the assumption that demand was stable throughout the period and that a fixed price of \$1.00 or a varying price averaging \$1.00 would have prevailed. The last column indicates the change in income variability as measured by the change in variance. The variance of income with a fixed price has been used as a base for comparison. Varying prices would have had little effect on income stability,

with the exceptions of Appanoose and Marshall Counties in Iowa. However, in the latter county the variance was increased rather than reduced.

In no case was the reduction in variance as large as would be indicated by the square of the correlation coefficient. The reason was that yields in the areas did not have an average proportional relationship to the national yield. Yield variations would be proportional if the regression constants were zero. The constants tend to differ from zero by important amounts, particularly where the correlation is large.

If individual farm data were available, it seems logical to assume that very few farmers would receive a reduction in income variance of more than 5 percent, while others would actually have the variance of their income increased by stabilizing the total value of a crop. Given the important losses arising due to the elimination of the possible gains from storage, there can be little basis for stabilizing the total value of a durable crop. The argument for a varying price for perishable crops must rest on other grounds than the reduction of income variability.

Area	Crop	$r^{21}$	Regression <sup>2</sup>	Variance <sup>3</sup>		Change in vari- ance <sup>4</sup>
				A	B	
						(%)
North Dakota	Wheat	.575*	-21.9+2.26X	8.3	7.4	-10
Sherman Co., Kan.	Wheat	.178*	-12.8+1.58X	25.6	24.0	-6
Marshall Co., Kan.	Wheat	.094	5.2+ .80X			
Osborne Co., Kan.	Wheat	.141	- 6.9+1.35X	23.8	22.2	- 7
Labette Co., Kan.	Wheat	.051	3.8+ .57X	11.7	11.9	- 7
Appanoose Co., Ia.	Corn	.711*	-16.8+1.80X	58.8	30.7	-42
Marshall Co., Ia.	Corn	.370*	8.0+1.39X	61.7	36.1	-34
Marshall Co., Kan.	Corn	.404*	-26.8+1.80X	94.2	74.6	-21
Floyd Co., Ia.	Corn	.153†	6.7+ .94X	67.8	58.8	-13
Humboldt Co., Ia.	Corn	.142†	17.6+ .91X	68.9	74.7	+ 8
Lucas Co., Ia.	Corn	.569*	-15.9+1.81X	68.0	45.0	-34
Webster Co., Ia.	Corn	.276*	3.2+1.42X	85.9	62.9	-27
Sherman Co., Kan.	Corn	.133†	-14.8+1.11X	108.6	98.0	-10
Osborne Co., Kan.	Corn	.261*	-29.9+1.69X	129.0	108.5	-16
Labette Co., Kan.	Corn	.347*	-13.2+1.14X	44.0	36.8	-17

<sup>1</sup> Square of correlation coefficient of area and national yield.

<sup>2</sup> Regression of area yield on national yield.

<sup>3</sup> Variance of income per acre assuming a fixed price of \$1.00 in Column A and a price varying inversely with national yield and averaging \$1.00, shown in Column B.

<sup>4</sup> Reduction or increase in variance, using fixed price as a base.

\* Significant at 1% level.

† Significant at 5% level.

A PRICE POLICY FOR AGRICULTURE, CONSISTENT  
WITH ECONOMIC PROGRESS THAT WILL  
PROMOTE ADEQUATE AND MORE  
STABLE INCOME FROM FARMING

FREDERICK V. WAUGH  
*U. S. Department of Agriculture*

WE SHALL propose two price programs for American agriculture: one for the "Steagall Period," and another for the "Post-Steagall Period."

I. *Program for the Steagall Period.*

The "Steagall Period" is the time during which the Federal Government is committed to support prices of farm products. Congress defined this period as *during the present war and until the expiration of the two-year period beginning the 1st day of January immediately following the date upon which the President by proclamation or the Congress by concurrent resolution declares that hostilities in the present war have terminated.*

Federal legislation directs the Department of Agriculture to support the prices of most important farm products during this period at *not less than 90 percentum of the parity or comparable price therefor.* (Cotton is to be supported at 92½ percent of parity.)

This legislation was passed for two good reasons: first, to encourage a large output of products needed in the war effort; and, second, to protect farmers from a possible sharp drop in prices and incomes while they are readjusting from war to peace.

In retrospect, we may well question the wisdom of the rigid commitment to support prices by a mechanical application of the parity formula. Nevertheless, the Government has made a definite commitment. However ill-advised the details of this commitment may now appear, it was a specific promise to farmers. That promise should be carried out. We propose the following steps:

A. *Prompt Announcement of Termination.*

Actual fighting in World War I ended in November 1918, but the war was not officially terminated until July 1921. It is quite possible that an even longer period might be required after the defeat of Japan to liquidate all matters relating to the present war. If Japan is defeated in the summer of 1946, this would mean that the official termination of the war might be postponed at least until some time in 1949. The Government would be committed to support prices of farm products until at least January 1, 1952.

The intent of the existing legislation is to protect the price of a farm product only for a period that will allow farmers to make a readjustment in the production of the commodity. In no case will the length of this period depend upon the time taken to wind up all military and legal matters related to the present war.

Therefore, we make two recommendations concerning the termination of the Steagall Period:

1. When actual fighting has stopped all food and fiber requirements should be reviewed. As soon as it is clear that these requirements will drop substantially and that American agriculture should begin to readjust to a peacetime basis, the President should proclaim that *hostilities have ceased for the purposes of all agricultural price support legislation.*
2. Congress should consider the advisability of clarifying present legislation by authorizing the Secretary of Agriculture to make a proclamation *when he finds that it is no longer necessary to encourage the expansion of production of any agricultural commodity* and of directing him to announce that *price supports for the commodity will be discontinued after a period of two years from the date of the proclamation.* This appears to be in accord with the intent of present legislation. It would authorize a gradual termination of the wartime price support program.

B. *Programs to Stimulate Demand.*

No price support program will work very long without a balance between production and consumption. Our main

efforts should be to keep this balance by maintaining a high rate of food and fiber consumption. In order to do this it will be necessary to give increased attention to the processing, marketing and distribution of foods and fibers. The Department of Agriculture should be given broader responsibilities in these fields. It might be desirable to change the name of the Department; perhaps to the "Department of Food and Agriculture." It should carry out the following programs to maintain high consumption:

1. *A national nutrition program.* The emphasis of this program would be upon measures to improve the diets of undernourished groups. The School Lunch Program should be expanded to provide, in cooperation with State agencies, one balanced meal a day for every school child—and also as many children of pre-school age as practicable. In addition, we will need a program to improve the diets of millions of low-income families. This might well be done along the general lines indicated in the National Food Allotment Bill (S. 1151, introduced June 18, 1945). This would be a voluntary program; applicants would pay part of the cost; they would buy enough food coupons to provide a diet meeting modern nutritional standards; and, like the former Food Stamp Plan, the foods would be distributed through established dealers.
2. *A foreign trade program.* A revival of foreign trade will be essential. The best possible domestic nutrition program will not provide adequate outlets for wheat, cotton, tobacco, and other export crops. The United States should use its influence to bring about a general, worldwide relaxation of international trade barriers. But we should recognize that progress along these lines may be slow and difficult. Therefore, we should also proceed immediately to work out international commodity agreements aimed at an orderly distribution of world supplies of the principal export commodities. These agreements should provide a "buffer stocks" program to even out fluctuation in supplies. They should also include measures to make surpluses available to undernourished populations in areas of chronic need.

3. New uses should be considered on a true "infant industry" basis; that is, surplus farm products should be made available for these uses at less than the support price if, and only if, there is a reasonable expectation that the new industry can eventually stand upon its own feet.

C. *Market Price Supports vs. Compensatory Payments.*

In spite of the measures outlined above, it is likely that surpluses will develop in the Steagall Period; that is, farmers probably will produce more of some things than the market will take at 90 percent of parity. The following measures are proposed to deal with this situation:

1. When the surplus is small and "manageable" it should be purchased or put under Government loan. It is "manageable" if a Government program can use it efficiently; —for example, by storing it against real future needs, or by using it for school lunches.
2. When the surplus is not manageable in the above sense, Congress should authorize compensatory payments to farmers in lieu of market price supports. The compensatory payment would make up the difference between the market price and 90 percent of parity. This would automatically prevent the piling up of surpluses, because the market price would drop to whatever level necessary to move the commodity into consumption in domestic and foreign markets.

Compensatory payments are no panacea for the problems of food and agriculture. First, like market price supports, they will tend to maintain a high rate of production even if demand falls off. Second, the direct costs from the U. S. Treasury of compensatory payments probably would be much greater than the cost of market price supports. This is because the demand for most farm products is inelastic; that is, a surplus of 10 percent tends to lower prices at the farm by more than 10 percent.

Too much emphasis should not be put upon relative costs from the U. S. Treasury. The public will pay for either price support program either in the form of taxes or in the form of higher food costs. Yet costs to the treasury are quite important. We believe it would be unwise



to rely entirely upon direct payments, and suggest only that they be authorized to meet special situations in which the surplus cannot be handled effectively by the government.

#### *D. Production Controls.*

As a last resort, it may be necessary to reduce production marketings of some specific commodities. In such cases we should avoid compulsion and regimentation. Individual quotas will doubtless be needed, but the farmer should be allowed to exceed his quota without incurring any penalty other than a lower price for the excess amount.

Under a program of compensatory payments this could be done simply by making Government payments to the farmer only on his quota amount; but allowing him to produce and sell as much more as he pleases at the market price. This would be an indirect form of production control. It would, in effect, set up a two-price system; 90 percent of parity for the quota, and a lower price for additional amounts.

If the price of a given commodity is supported by Government purchases or loans, the most effective way of establishing such a two-price system would be by taxing the extra-quota amounts sold by each farmer. In such cases the tax should be computed to represent as accurately as possible the difference between the support level and the estimated "free" market price, (that is, the price that would prevail if the market were unsupported).

#### *II. Program for the Post-Steagall Period.*

The program outlined above for the Steagall Period is based upon the conviction that the Government's promises should always be carried out, even if they involve serious economic difficulties. But it is high time that everyone—farmers, Congressmen, Government officials, and others—recognize the inherent unsoundness of any attempt to freeze prices for any considerable periods at any stated percentage of a historical parity. Whether this is done by purchases and loans, or by payments to farmers, it can lead only to a poor use of economic resources. This is because it inevitably tends to prevent shifts from com-

modity to commodity, and from farming to other occupations, in line with changes in the effective demand of the public, or in line with changes in production costs.

The worst program that might be urged upon Congress would be to extend the Steagall Period indefinitely or permanently, and then to tinker with the parity formula to find ways of raising the price-support levels for one product after another. Such a program could end only in disaster; either in the form of unbearable regimentation, or in the form of unmanageable surpluses.

Yet there is need for a permanent program of "forward prices" to guide agricultural production. Experience has demonstrated that research and education in farm management are not enough. The Outlook Program before the war provided farmers with facts, statistics, analyses, and forecasts. This was good, but it should be supplemented with more definite assurances concerning prices. During the war we have seen the effectiveness of forward prices as a means of stimulating the production of critical items. We have seen, also, that advance notice of a drop in price supports can lead to a sharp reduction in output; for example, the announcement of a drop in the support price for hogs was an important factor in reducing farrowings in 1944.

We should not abandon price supports after the Steagall Period. We should use them as an essential part of a revitalized Outlook Program to guide agricultural production and marketing in the long-term interests of the farmer and the general public.

But this can be done only if the price support levels are frequently adjusted in line with changes in demand and in the costs of production.

We propose the following program to take effect immediately after the end of the Steagall Period:

#### *A. Forward Price Program.*

1. The Department of Food and Agriculture would announce the support level for each farm product at least six months in advance of the marketing period, and, where practicable, before the farmer plants his crops or breeds his livestock. These forward prices would be guaranteed by commitments either to support market prices or to make compensatory payments. They would be

given wide publicity through an Outlook Program in co-operation with the Land Grant Colleges.

2. In determining the support level for any commodity the Department would first compute the simple average of the support levels for the preceding three years. This would be expressed as a percentage of parity. We shall call this average  $S_1$ . For example, if in the preceding three years the price support for hogs had been 95, 105, and 91 percent of parity the average

$$S_1 = \frac{1}{3}(95 + 105 + 91) = 97 \text{ percent of parity.}$$

The new support price (which we shall call  $S_2$ ) would be determined by adjusting  $S_1$  to take account of conditions of demand and supply.

The method of adjustment will be described very briefly in the two following paragraphs. It will also be described and justified more fully in a technical appendix. Essentially we propose to adjust the support price levels on the basis of the price-support experience in recent years—lowering the price if there have been surpluses and raising it if there have been deficits.

3. If in the preceding three years the market price had been "free" (that is, unsupported by purchases or by loans) the Department would compute the simple average of the market price, as a percentage of parity. We shall call this average market price  $M$ . The new support price,  $S_2$ , would be the simple average of  $M$  and  $S_1$ . For example, if the support price in the preceding three years,  $S_1$ , averaged 95 percent of parity; and if the market price averaged 101 percent of parity the new support price,  $S_2$ , would be 98 percent of parity. But if the market price averaged 73 percent of parity (compensatory payments making up the difference between that level and a support level of 95 percent of parity) the new support price would be 84 percent of parity.
4. If purchases or loans had been made in the preceding three years to maintain the market price, the new support level would be lowered from  $S_1$  by a percentage equal to one-half the percentage of the annual production acquired by the Government for price-support purposes. For example, if the Government purchased (or acquired under loans) 8 percent of the production of a given com-

modity in order to support the price at 90 percent of parity, the new support price,  $S_2$ , would be 86 percent of parity.

*B. Programs to Stimulate Demand.*

The consumption programs outlined for the Steagall Period would be continued permanently and would be expanded whenever there were a business depression and unemployment. This would not only help stabilize farm income; it would help maintain diet and health; and it would have a considerable stabilizing effect upon the economy as a whole.

*C. Production Control.*

There would be no acreage allotments nor marketing quotas.

*D. Soil Conservation.*

Soil conservation payments would be made solely to encourage sound practices intended to maintain agricultural productivity.

*E. Income Payments.*

It is possible that, in a period of industrial depression, farm incomes might drop in spite of the programs outlined above. Unless large appropriations were made for consumption programs, continued surpluses might lower the support price levels for all major farm products in a period of general depression.

In such cases the income of farmers should be supplemented by some form of income payment. Perhaps the best form of payment is one conditioned upon compliance with a program of sound readjustments in the agriculture of each area. Each State and county should be asked to develop a long-term program to make the best possible use of its farming resources in view of prospective demands. Local farmers and local research agencies would have the main responsibility for developing these programs.

### TECHNICAL APPENDIX

*Adjustment of Price Support Levels in the Post-Steagall Period*

We have proposed two methods of adjusting price support levels in the years following the Steagall Period. Both of these methods are based upon the price support experience of the three years immediately preceding the adjustment. Both assume that if the support program during these three years had resulted in a large surplus of any commodity, the price support level was too high and should be lowered. They assume, likewise, that if

market price of a commodity were consistently above the support level in the preceding three years, the support for that commodity should be raised.

We propose here to explain more fully the principles involved in these adjustments, and to demonstrate that they would tend to bring about a balance between production and consumption.

### I. Adjustment if Market Price Were "Free"

The market price in the preceding three years would be considered "free" if there had been no price-supporting purchases nor loans. It would have been "free" if (a) the market price had been above the support levels, or if (b) the difference between the market price and the support level had been made up by a compensatory payment.

In either case let

$S_1$  = the simple arithmetic mean of the price supports during the previous three years, expressed as a percentage of parity.

$M$  = the simple arithmetic mean of prices received by farmers during the previous three years, expressed as a percentage of parity.

$S_2$  = the new price support level (the forward price), expressed as a percentage of parity.

Then the proposed adjustment is

$$S_2 = \frac{1}{2}(S_1 + M).$$

Let us see how this would work. First, let us consider the situation if the free market price  $M$ , had been higher than the support level,  $S_1$ .

In Figure 1 the curve labeled "supply" shows the amounts of a given commodity that farmers would produce at various prices. The curve labeled

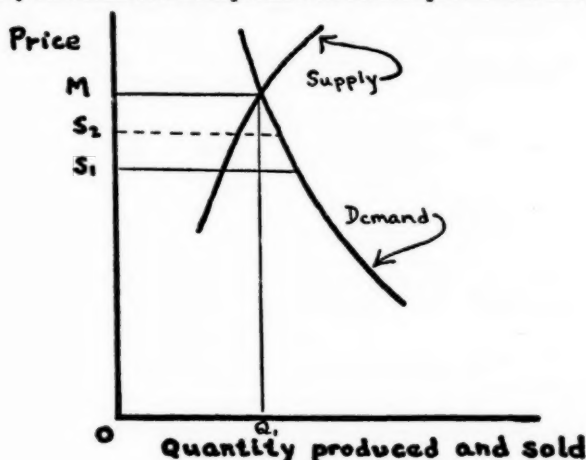


FIG. 1

"demand" shows amounts the markets would absorb at these prices. At the support level,  $S_1$ , farmers are unwilling to produce as much as the market would absorb. Production and consumption are balanced at  $Q_1$  with a market price,  $M$ , that is higher than the support price,  $S_1$ .

This situation will arise only if the support level,  $S_1$ , is lower than justified by demand and supply conditions. This situation would indicate either an increase in the demand for that commodity or an increase in comparative costs or production. An increase in the support level would be clearly justified.

Possibly the level could be raised to  $M$  immediately. Our proposal is more conservative. Raising the level to  $S_2 = \frac{1}{2}(S_1 + M)$  would partly overcome the maladjustment the first year. A series of such adjustments in later years would tend to place the support level at approximately the point where production and consumption balance. This is true not only of the simple case illustrated, in which we assume stationary demand and supply curves. The adjustment would also tend to encourage a balance between production and consumption in case there were definite trends in demand conditions or in supply conditions.

Now, let us consider what would happen if the free market price,  $M$ , were lower than the support price,  $S_1$ . In such cases we assume that compensatory payments of  $(S_1 - M)$  were made to farmers for each unit produced and sold.

The situation is illustrated in Figure 2.

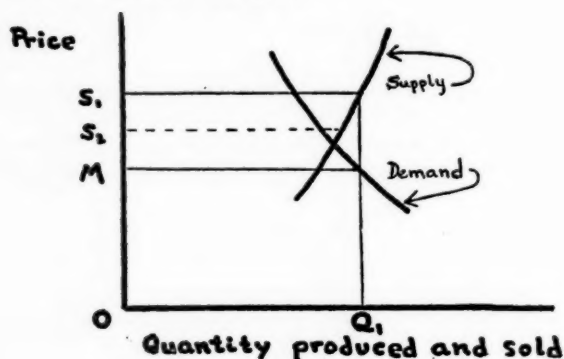


FIG. 2

In Figure 2 we assume that the supply curve and the demand curve for a commodity are such that farmers produce  $Q_1$ , at the support price,  $S_1$ ; and that the market will not absorb the supply at this price. The market price drops to  $M$ . The government makes compensatory payments to farmers of  $(S_1 - M)$  for each unit produced and sold.

This situation, continuing for three years, demonstrates that the support level,  $S_1$ , is higher than is justified by demand and supply conditions. Either the demand for the commodity has fallen, or costs of production have been reduced.

The proposed adjustment,  $S_2 = \frac{1}{2}(S_1 + M)$  will always tend to bring production and consumption more nearly toward a balance. Ordinarily the balance will not be exact the first year, but a series of such adjustments will tend to bring about the proper balance whether demand and supply conditions are stationary, or whether they follow definite trends.



## II. Adjustment When Market Prices Had Been Supported

When the market price had been supported during the previous three years, a different adjustment would be needed. In this case the market price would be an artificial price that did not indicate the desirable level of supports. This fact is sometimes overlooked in connection with proposals for computing a "true" parity price simply by taking a more recent base period, or by using a "pre-depression" market price. If the market price has been supported by purchases or by loans in the proposed base period, we should take into consideration the surpluses that have resulted.

Our proposed adjustment, and its consequences, are illustrated in Figure 3.

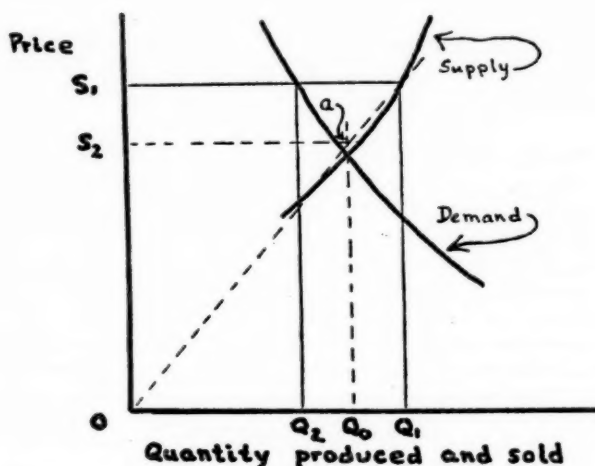


FIG. 3

We assume in Figure 3 that the market price of a commodity was supported at  $S_1$ ; and that demand and supply conditions were such that farmers produced  $Q_1$ ; while the market would absorb only  $Q_2$ . This left a surplus of  $(Q_1 - Q_2)$  to be acquired by the government. Continued surpluses of this kind over three years demonstrate that  $S_1$  is higher than justified by current market conditions. How much should the support level be reduced?

Our proposal is that the new support level should be

$$S_2 = S_1 \left( 1 - \frac{Q_1 - Q_2}{2Q_1} \right) = \frac{S_1}{Q_1} \left( \frac{Q_1 + Q_2}{2} \right)$$

Graphically, we can locate  $S_2$  on the diagram by the following procedure: draw a straight line from the origin,  $O$ , to the intersection of the perpendiculars at  $Q$  and at  $S_1$ ; locate  $Q_0$  half-way between  $Q_1$  and  $Q_2$ ; and erect a perpendicular at  $Q_0$ ; the two lines just drawn intersect at  $a$ ; a horizontal line drawn through  $a$  will intersect the price axis at  $S_2$ .

The adjusted support price,  $S_2$ , will ordinarily be an improvement over  $S_1$ ; that is, it will ordinarily more nearly balance production and consumption. The balance is not likely to be exact the first year, but a series of adjustments will ordinarily tend toward such a balance.

Perhaps it is well to note that in one extreme case this type of adjustment might fail to bring production and consumption closer together. This extreme case would be that in which the supply curve, the demand curve, or both were almost horizontal (that is, extremely elastic). In such a case only a slight adjustment in the support price would be needed to bring production and consumption into balance. Our proposed adjustment would be too great in such cases. We believe that such extreme situations are at least rare, and probably non-existent. If experience with the program should demonstrate the existence of such situations in the case of specific commodities the adjustment formula could be corrected to reduce the

support price by less than  $\frac{100}{2} \left( \frac{Q_1 - Q_2}{Q_1} \right)$  percent.

This difficulty would not arise in connection with the adjustments illustrated in Figures 1 and 2. In all cases those adjustments would bring the support price closer to the equilibrium price.

The proposed adjustments are simple; easy to understand, and easy to administer. They are objective and do not discriminate unfairly as between different groups of producers or consumers.

Even during the Steagall Period, when prices of all important agricultural commodities would be supported at 90 percent of parity, farmers would have advance information about the adjustments in support-price levels that would become effective at the termination of the period.

*An Honorable Mention Paper*

**A PRICE POLICY FOR AGRICULTURE, CONSISTENT  
WITH ECONOMIC PROGRESS, THAT WILL  
PROMOTE ADEQUATE AND MORE  
STABLE INCOME FROM FARMING**

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**A**S A PRODUCER of agricultural products, I wish for the following in respect to products:

- (1) To sell my product at a price which, when applied to the volume that I am able to raise by faithful effort, will cover my costs and return me an income equal to that which I could earn in any other occupation;
- (2) Protection from extreme economic disturbances beyond my control;
- (3) The least possible regimentation consistent with the above.

The first desire can be realized by two educational programs. In one of these educational programs I should be kept fully informed as to changing needs for the crops and livestock which I grow and for the crops and livestock which I may grow. The U. S. Department of Agriculture and the Land Grant Colleges are now equipped to render this service. In planning my production for the year ahead I shall be guided by probable profits under alternate production plans at prices which I am led to believe will apply to my products at the time of sale. In addition I should be kept informed as to the income which men of ability similar to mine are receiving in other occupations. This is the parity in which I am interested, the relation of my income to that of men with like skills in trades and industries.

The other educational program should provide me and my children an opportunity to learn other occupations in which we are interested and for which we can be fitted. Also my children's training should prepare them to make necessary occupational and social adjustments and give them confidence of success and happiness in other occupations at other locations. When such training has been secured, we will continue to farm or leave the farm for others to work, depending on the relative advantages which these alternate occupations offer. If I must leave the farm in the interests of my

family, this I will do until such time as it may once again be equally profitable for me to farm.

I cannot ask society to support me in an over-manned occupation, but rightly can ask for the educational opportunity to prepare for an occupation where my services are needed in larger degree and where the financial reward promises to be greater. Freedom of movement from one job to another is a great income equalizer, and if society will keep the occupational door open and make the necessary training available, the goal desired of equal returns for equal effort will be achieved.

Prices for the products of the farm are not predictable at planting time, as unpredictable as some of the principal causes of their change—war, weather, governmental monetary policy. During the year a heavy investment in growing crops and livestock, several times any possible net income, is built up. On almost any year a severe break in prices can result in heavy losses that may reduce or end my production operations. I may be the chief loser, but society as a whole will be adversely affected if the operations of my neighbors and myself are reduced by financial calamity.

Protection from losses due to falling prices may be achieved by the application of an old, well-tried, and widely accepted device. Risk insurance can be made available by government with relative ease on an annual basis. The protection needed most is against a drop in price from one harvesting or marketing season to another, and against a too rapid price decline over a period of years. I would like protective assurance that a price drop of not more than ten percent would occur from one marketing season to another. The determination of the amount of any price change should be on a national or central market basis for a given commodity. A satisfactory computation for most products could be made from the Department of Agriculture's figures, called Average Prices Received by Farmers for Farm Products. For indemnity purposes I would like a cash payment determined by the following calculation: quantity of each principal product sold from my farm in the current season *times* the average sale price in my county in the marketing season one year previous *times* the percentage, if positive, obtained by subtracting from 90 percent the percentage which the national farm price of the commodity in the current marketing season is of the national farm price of that commodity in the marketing season one year previous. In order to insure against a too rapid price de-

cline over a period of years it would be necessary to substitute for the denominator, after the plan has been put into operation, the *effective support price* of that marketing season one year previous, whenever this is larger. The indemnity can be stated by formula as follows:

$$\text{Indemnity} = \left(0.90 - \frac{a}{b}\right)cd$$

Where  $a$  is U. S. marketing season price for the current year,  $b$  is U. S. marketing season price for the preceding year (or effective support price whenever larger),  $c$  is county marketing season price for the previous year,  $d$  is quantity sold from the farm in the current marketing season.

*Note:* The quantity  $\left(0.90 - \frac{a}{b}\right)$  would be applied to all farms in the

United States producing a given commodity in any year and would be applicable only when positive. The quantity  $c$  would be applied to all such farms in a given county. The quantity  $d$  would vary with each individual farm.

Such insurance would serve two purposes: it would protect consumers from farm commodity scarcities with accompanying high prices which have tended to occur following years of such low farm prices that many producers are put out of production, and would protect the producer from financial ruin. I suggest that the cost be actuarially determined and that half the cost be paid by the producer and the other half by the government.

Congress has already provided a crop insurance law, Ch. 36, Title 7, U. S. Code, 1940 Ed., Supp. IV, 1941-45, Secs. 1502-1519. It is the stated purpose of this law "to promote the national welfare by alleviating the economic distress caused by crop failures . . . by maintaining the purchasing power of farmers and by providing for stable supplies of agricultural commodities. . . ." The procedure has been developed for insuring "against loss in yields" of certain crops. Premiums are based on historic yields and current acreage on each farm. Premiums for risk insurance against price drops could be based on the same factors. In case of livestock a similar device could be employed. Application could be on the same form as that used for "yield" insurance. Average prices received by farmers for all major farm products are now being assembled for the country as a whole and by states by the Bureau of Agricultural

Economics, and published in *Crops and Markets*. County prices for many commodities would be the same as state prices, but when this is not the case, the same device and for most part the same basic data can be used for obtaining county sale prices. Actuarial cost would have to be determined on a country-wide basis. The same agency on the national, state and county level could be used to administer the proposed price insurance program as that which handles the crop insurance law to which reference has been made.

Now the third desire mentioned above was for the least possible regimentation. I have suggested an enlargement of the services of one agency, the Federal Crop Insurance Corporation. Only insurance powers should be given this agency: no control over either amount of production or prices. At the same time I am suggesting the retirement of the Commodity Credit Corporation and the sale of its stocks of commodities. The insurance program suggested would protect producers in large measure from the falling prices which might result. The Agricultural Adjustment Agency programs of restriction in production or of relief, even though payments are made in the name of soil conservation, should be stopped. The provisions of the Steagall Amendment, promising 90 percent of parity, should not be extended and its operations should cease when the present commitments to producers have been satisfied. The plan I have suggested also provides a 90 percent price protection, not 90 percent of a theoretical parity, but 90 percent of the previous year's prices or of the effective support price in that previous year, which would make it possible to begin where the Steagall Amendment leaves off, by each year adjusting prices where necessary, downward by 10 percent, until long-time economic changes brought about by competition in the domestic market, new world market conditions and changed costs of production have become operative factors in price. With the plan suggested, fewer farmers will fail and the rehabilitation programs such as those operated by the Farm Security Administration will be less needed.

I have written the foregoing in the first person, but I am thinking of others too. In the postwar world American farmers are destined to face increasing competition. The competition will be between American crops and livestock and foreign crops and livestock for the world market and also on the American market between farm products and synthetic products, such as cotton versus rayon, alcohol from grain versus alcohol from sawdust. Prices must be



competitive to keep foreign production or substitute products from taking the market. And in some areas farming may become unprofitable.

The plan I have suggested provides for price adjustment to meet competition, but it also slows the impact of falling prices on the individual, giving him time and also training and opportunity to find other employment when such becomes necessary. It would reduce the burden on the federal treasury and would tend to provide an equality of income without regimentation.

*An Honorable Mention Paper*

A PRICE POLICY FOR AGRICULTURE, CONSISTENT  
WITH ECONOMIC PROGRESS, THAT WILL  
PROMOTE ADEQUATE AND MORE  
STABLE INCOME FROM FARMING:  
AN INSURANCE PRICE SYSTEM

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1. An appropriate peacetime agricultural price policy for the United States would be one which (a) specifically refrained from governmental manipulation of domestic *market* prices, leaving these to move freely one in relation to another, in relation to nonagricultural prices, and in relation to corresponding international market prices; (b) addressed itself directly to the heart of the matter, which is governmental protection of farmers against periods of unbearably low level of income; and (c) avoided an uneconomic allocation of national resources to farming as compared with other activities or to one type of farming or product as compared with other types.

2. Such a policy presumably could not be inaugurated until existing governmental commitments—market-price support to farmers for two years after the close of the war—had been fulfilled. The necessary groundwork, however, could be prepared in the intervening years.

3. Traditional agricultural price policy (if regarded as permanent peacetime rather than emergency policy) presents the nation with a series of unpalatable and intolerable dilemmas. The basic effort is to elevate domestic *market* prices of farm products in such degree that farmers or their political representatives will be satisfied with the income resulting from the elevated prices. In short, the basic effort is to *guarantee farm prosperity chiefly through governmental manipulation of market price*. So far as such manipulation is successful, domestic prices of farm products normally or potentially produced in excess of domestic requirements are brought above a level permitting unsubsidized exports, and also above a level permitting maximum domestic absorption. By governmental elevation of market price, the country is priced out of the international market, while at home the farms tend to be priced out of the domestic market. Failing export and domestic subsidy, the govern-

ment must purchase and hold ever-increasing stocks, unless it can reduce domestic output to such levels that surpluses no longer emerge. While the United States remains or is thought likely to remain out of the international market, output in competing foreign countries is encouraged. This, as well as the holding of stocks domestically (so long as the commercial world continues to suspect that such stocks, whatever their magnitude, may suddenly be dumped on the markets), tends to depress international prices. Accordingly, the government is inevitably driven towards (a) subsidization of exports, (b) subsidization of domestic consumption, and (c) restriction of domestic production either unilaterally or in concert with other nations under international commodity arrangements. But subsidization of exports is unwelcome because it tends to worsen international relations by prompting competitive subsidization and erection or elevation of import barriers; and restriction of domestic output is unwelcome because it involves a degree of direct governmental intervention in farm management highly distasteful to a democratic society. Only subsidization of domestic consumption is reasonably tolerable, and this within limits and because of public conviction that national health may be enhanced thereby.

4. Continuation of the traditional agricultural price policy into the post-price-support years thus means protection of farm income at the heavy cost of domestic and international regimentation. The present course of policy is set towards an increasing degree of regimented reduction of output at home coupled, in all probability, with domestic maintenance and elevation of trade barriers in the form of tariff duties and import quotas. This course is utterly inconsistent with other accepted policies of international economic collaboration, the maintenance of a peaceful world, and an expanding world economy. Thus the fundamental question at issue is whether or not farmers can be accorded a legitimate degree of protection against income hazards without recourse to policies and procedures which adversely affect international trade, peaceful international relationships, and world economic expansion.

5. It must be admitted that farmers have a just claim against the state for legitimate protection against hazards of low income. This proposition would not have been admitted as valid thirty or forty years ago. But in the interval the public conviction has become established, not only in the United States but also in other economi-

cally advanced nations, that the state owes its citizens (including farmers) a degree of economic security much exceeding what was accorded under policies close to *laissez-faire* but surely falling short of guarantee of perpetual prosperity.

6. The major hazards of income faced by individual farmers are those of the accident of abnormally low yield and those of the incidence of abnormally low price, or both in combination. The view here advanced is that farmers have a legitimate claim against the state for insurance against both of these major hazards. Their claim is legitimate not because farmers are peculiarly important or meritorious as an occupational group, but because they are citizens and as such are entitled to a degree of social security which cannot be provided solely by their own efforts.

7. Specifically, it is proposed here that federal agricultural price policy be based upon a system (a) of governmental insurance against abnormally low yield, and (b) of farm-income subsidies, paid (when the occasion for payment arises) from general funds of the Treasury, in the form of direct compensation to producers of selected farm products, as insurance against abnormally low price.

8. In this paper nothing more is said about governmental insurance against abnormally low yield, since this does not bear upon the question of *price* policy. Nor is it necessary to elaborate upon possibly acceptable devices of affecting market prices favorably to farmers by subsidization of domestic consumption, as exemplified by the school-lunch or blue-stamp or similar programs. These may be regarded as peripheral and supplementary, each to be appraised on its own merits.

9. Briefly, the "insurance price system" might be implemented as follows by federal statute:

(a) The government announces its commitment, indefinite in term, to pay to primary producers, for the "normal marketings" of a year's production, the difference between an absolute insurance price and the average annual market price at the farm whenever the absolute insurance price exceeds the market price at the farm.

(b) A "Farm Price Insurance Fund" is appropriated from general revenue and made available for financing the insurance price system.

(c) By statute there is first established for each included commodity an "insurance price range" expressed in terms of percentages of parity price. Let it be assumed that the statutory insurance

price range for any commodity is fixed at 65-80 percent of that commodity's parity price, this range to endure until such time as revision of the statute occurs.

(d) By statute the Secretary of Agriculture is empowered (i) to determine and announce an "absolute insurance price" for *each* insurance year in advance, this to fall within the statutory range of 65-80 percent of the parity price of each included commodity and, like parity price itself, to be expressed as average national farm price; (ii) to ascertain the number of units of any commodity to be regarded as a "normal crop marketing"; (iii) to ascertain the normal share of each producer, measured in marketed units, in the aggregate of the normal crop marketing; (iv) to calculate for the insurance year (perhaps on principles specified by statute) the actual national average farm price; (v) to ascertain whether or not the announced absolute insurance price exceeds the national average farm price; (vi) if so, to determine the per unit amount of the excess, to reckon the insurance payment in terms of excess multiplied by the number of units in normal crop marketings, and to calculate the sharing of the insurance payment among producers according to their predetermined share of the normal crop marketing; and (vii) to distribute, or order the distribution of, the insurance payments to individual producers from the Farm Price Insurance Fund.

(e) In order to provide farmers currently with income from insurance payments in years when actual market price at the farm is definitely known to be running below the announced absolute insurance price, the Secretary of Agriculture should be empowered by statute (i) to proclaim the existence of an "insurance year"; (ii) to estimate prior to the seventh month of the insurance year the probable per unit insurance payment for the year; and (iii) to extend to banks making loans to claimant farmers on the security of evidence of their share in the normal crop marketing a guarantee of repayment of loan up to one-half of each borrower's attested claim for insurance payment.

10. The difficulties are minor and technical that might be expected to arise with reference to definition of "normal crop marketing," of "shares of producers" (or farms) in normal crop marketings, of "absolute insurance price" after the range of insurance price had been established by statute, of actual "national average farm price," or of "insurance years" for the several included farm products.

The major problems would arise not administratively, but in the writing of the statute: (a) the selection of commodities to be included, (b) the fixing of the statutory range of insurance price for each included commodity, and (c) the size of the appropriation necessary to establish the Farm Price Insurance Fund. These are interrelated problems; for the wider the selection of commodities included and the higher the absolute range of insurance price, the larger would be the necessary annual expenditure from the Fund (annual average farm price taken as a constant). It should be observed, however, both that no payments would be necessary in years when actual market price of each included commodity equaled or exceeded absolute insurance price, and that in some years payments might be necessary on a few commodities but not on many or all.

11. With respect to commodities included, all significant contributors to farm income, whether crops or livestock and its products, could be covered. It is true that administrative work would increase with the number of items covered; but this is not a compelling reason for initial selection of very few. Wide inclusion is made possible by the concept of basing insurance price payments upon normal crop marketings, because this concept immediately eliminates the problem of administrative differentiation between feed and seed on the one hand and marketed products on the other. The farmer who normally produced corn solely for sale would have a claim to insurance price payments for marketed corn but not for hogs or cattle fed on his corn by some other producer. The farmer who normally produced corn wholly for feed on his own farm would have no claim for insurance price payments on corn but would have a claim for insurance price payments on the marketed hogs and cattle fed on his corn. Normal marketing practices, in short, would determine the nature of any farmer's claim to insurance payments. Of two farmers normally producing equal quantities of corn, one might have large claims to corn payments and small claims to hog payments, while the other might have small claims to corn payments and large claims to hog payments. Except as administrative work on farm products contributing very little to farm income seems undesirable. The insurance price system ought to cover the widest possible range of products on the principle of extending benefits to all, the farmer who normally markets a variety of products



and the farmer who normally markets only one could then share equitably in the benefits of the insurance price system.

12. With respect to the statutory range of insurance price, the range actually set might be anywhere from well below parity price to approximately the parity-price level. The obvious danger of setting the range at about parity level for each included commodity is that thereby farming might be made so attractive an occupation that national resources of labor and capital would be attracted to it (or retained in it) in undue degree. The effects of this would be to expand production and export surpluses, to depress domestic and international prices, and to enlarge the annual expenditure from the Fund. But full parity price could not objectively be regarded as an appropriate level of insurance price, first because parity prices represent historically a price level abnormally favorable (in peacetime) for farm products, and second because no insurance system such as is suggested here can properly be designed to permit claimants to recover full or desired values. Yet parity prices could be accepted as useful guides to the fixation of insurance prices. If for each included commodity the statute should specify the insurance price as 65-80 percent of the parity price, it would accord to farmers what they may legitimately claim of the state—protection against unbearably low levels of income but not guarantee of prosperity. Insurance prices set at such levels could have no appreciable influence in determining the allocation of national resources between farming and nonfarming. The effect would be to put a floor, but not too high a floor, under farm income; but there would be no floor under farm price.

13. With respect to the size of the initial appropriation for the Farm Price Insurance Fund, it seems reasonably probable that \$3 billion would suffice with levels of insurance prices set by statute at 65-80 percent of parity. No calculation, however, could be an exact one unless it should become possible to forecast the relationship between parity price and actual market price. In any event, supplementary appropriations would be possible if, in the course of operations, this sum promised to prove inadequate; and after a year or two of experience the insurance price system might be revised with particular reference to levels of insurance prices in relation to burdens on the Treasury.

14. The objection may be raised that establishment of insurance

prices for each of many farm products might tend to stimulate uneconomic emphasis on production of some items as against others. It has been suggested above, however, that only a *range* of insurance price be specified by statute, and that latitude be given the administrator to designate each absolute insurance price, one year at a time, within the statutory range. Reasonably wise administration, which must be assumed, could be counted upon to minimize uneconomic allocation of national resources to some products as compared with others.

15. It will be observed that no provision has been suggested to favor small (low-income) farmers as against large (high-income) farmers. Each would share in insurance price payments according to his contribution to normal crop marketings. The proposition is here advanced that equalization of individual incomes, so far as it may be espoused as national policy, can be sufficiently achieved through the familiar mechanism of the graduated federal personal income tax.

16. The agricultural insurance price system proposed above has, as compared with traditional agricultural price policy, the outstanding advantages of being consistent with an international policy toward greater freedom of international trade and peaceful international relationships, and with a domestic policy of maximum freedom of individual enterprise. The insurance price system would have the conspicuous effects of removing government from the business of purchasing commodities, holding stocks, managing exports, and restricting production, and of allowing prices of farm products to move unhampered in relation to corresponding international prices and domestically in relation one to another. Both international and domestic absorption (the surest cure of surpluses) would be facilitated in periods of low market price. A gradual reduction of barriers to imports would be feasible without arousing political opposition, assuming statutory insurance price ranges to remain substantially unchanged. The allocation of national resources to agriculture as compared with other occupations would not be made uneconomic unless the levels of statutory insurance price range should be set too high, at or near parity price; but where these would be set could be determined only through Congressional debate. The allocation of national resources as between agricultural products would not be made uneconomic so long as administrative officials were allowed to fix absolute insurance price

within a moderate range, and so long as a reasonable degree of administrative competence can be assumed (as it must be in any interventionist policy). Administrative difficulties need be no barrier to adoption of the insurance price system; presumably these would indeed be less than under traditional price policy and would involve a smaller administrative personnel. Farmers would no longer be subjected to the regimentations involved in production controls. The burden upon the Treasury would not be excessive unless the enabling statute should set the range of insurance price too high—again a matter for Congressional debate. Income from farming would be made more stable in the sense that the depth of troughs would be lessened. Finally, the insurance price system would be capable of according to farmers a degree of economic security which they may legitimately claim of the state; operations of the system would not result in inequitable benefits as between farmers; and sharing in the benefits of the system would be optional. Thus the insurance price system here proposed meets the criteria of an agricultural price policy that is consistent with economic progress, and that will promote adequate and more stable income from farming.

18. Whether or not adoption of an insurance price system is politically feasible is a matter of opinion. Although its adoption would mean discard of most features of traditional price policy as established in legislation, no one can assert with assurance that traditional price policy is also immutable price policy; and in fact it cannot be immutable if current announced policies of international economic collaboration are to be pursued. Adoption of an insurance price system and discard of the traditional agricultural price policy could occur, as any major change can occur, if accorded sufficient public, legislative, and administrative support. The test might well come during the next two years or more, during which no alternative seems open but to continue on the road of agricultural market-price support by traditional methods.

19. The proposed insurance price system could not be rejected as unconstitutional.

*An Honorable Mention Paper*

**A PRICE POLICY FOR AGRICULTURE, CONSISTENT  
WITH ECONOMIC PROGRESS, THAT WILL  
PROMOTE ADEQUATE AND MORE  
STABLE INCOME FROM FARMING**

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**F**ARM price policy in the United States has become nationalistic with little relationship to world agricultural prices. As a result, this disparity between domestic and world prices is beginning to pose a dilemma for American farmers. On the one hand if United States farm prices are above those of other surplus producing countries, exports are discouraged. At the same time a higher level of United States prices attracts imports of competitive farm products in the face of domestic surpluses.

At the present time the United States is on an import price basis for most of the principal agricultural products—that is, prices in the United States exceed those of foreign surplus areas by more than the amount of the import duty. The possible 50 percent reduction in the present import duties on agricultural products under the 1945 Trade Agreement Act extension would widen still further this price disparity, as would the pending bills to revise parity, e.g. H. R. 754 and S. 507. Should the duty reduction authority be widely used and either parity bill be enacted the United States would go onto an import basis for practically every agricultural commodity unless strong measures were taken to control imports.

For the time being the demand situation both at home and abroad, shipping availability and limited world supplies obscure the basic effects of these price level disparities for both exports and imports. For the post-war period, however, the price level relationships cannot be ignored. In fact United States-foreign price disparities appear to offer a starting point for consideration of a new and longer-time price policy. Unless our farm price policy can meet the test of coordination with a foreign trade policy, the United States is threatened by a still greater dilemma of economic isolationism versus political internationalism.

*Alternative Courses of Action**1. Parity Prices with Price Support*

Without a doubt the maintenance of parity prices would be popular with farmers. It would have the advantage of continuing the present price relationship with labor rates, taxes, costs of things farmers buy, and other factors in the price economy. It would maintain farm income through the regular price structure. It is the method currently in operation and supported by existing legislation, a fact that will favor its continuance.

On the other hand if farm income is to be regulated largely by the price level, a system of foreign trade controls will become imperative as price disparities develop. For commodities in surplus, subsidies will be needed both for special use within the United States and for export. Processing taxes or special appropriations by Congress to meet the losses incurred will be necessary. Such a procedure places the Government in control of agricultural exports and that share of the domestic production not regularly used in commercial trade in the United States. For imports, absolute quotas would need to be established for an increasing number of agricultural products<sup>1</sup> in order to prevent the domestic market from being flooded with foreign surpluses and, as a result, United States prices being forced down or United States price support measures being called upon to support foreign as well as domestic production. Though having a wide appeal, it is obvious that parity prices with price support is definitely a nationalistic policy and should be so recognized.

*2. Competitive Prices and Income Payments*

Before the loan program with price support became an important factor in determining United States agricultural price levels, competitive world prices largely regulated prices and trade in agricultural products. The story of increasing competition from lower cost foreign areas, the sharp fluctuations in price and income from year to year, and the disastrous effect of low prices in the depression years is one that is well known. Any program based upon the possible return to such conditions for American agriculture is ruled out of consideration as being unacceptable.

<sup>1</sup> Import quotas have already been established under Section 22 of the AAA Act, as amended, for the two basic commodities, wheat and cotton.

Looking ahead to post-war agriculture in the United States, however, two general periods may be expected—the one of transition and adjustment from war to peacetime conditions and the other, the longer and more permanent pattern of development. The greatest difficulties are likely to arise in the transition and early adjustment period, but if farm price policy during this period is within the general framework of a more permanent type program, an orderly evolving post-war development can take place. If competitive pricing were adopted as a generally basic principle for commodities in foreign trade, and if such prices were supplemented by additional income payments, at least during the period of transition and basic adjustment, it should be possible to gain the advantages of international pricing and at the same time promote an adequate and more stable income from farming.

Competitive prices with other surplus producers would facilitate export movement and also the use of surpluses within the United States with little or no Government assistance. Labor could have relatively cheap food and consume all it wanted; industry could use more agricultural products for its raw material; consumption, and in turn production, would tend to be maximized and producers would receive an income supplement that would maintain a working parity relationship to other segments of the economy.

Such a program, of course, is not without its problems. One would be the annual appropriation or tax mechanism to provide money for the income supplement payments. Economy waves or political developments could adversely affect the stability of such payments. Present legislation<sup>2</sup> also raises considerable doubt that an immediate shift from price support to competitive pricing would be possible for the agricultural products specifically covered by its provisions and perhaps others. The intent of Congress in such legislation appears quite clear that market prices were to be supported for at least 2 years after the war.

### 3. *A Combination Program*

In view of existing legislation with regard to price support commitments and the desired objectives that might be attained by the policy of competitive pricing and income supplement payments, a

<sup>2</sup> Particularly the Steagall amendment and the basic commodity loan legislation of Section 8 of the Stabilization Act of 1942, and as amended.



combination of the two programs suggests itself. Such a program might include the continuation of price support for the commodities for which, and as long as, it appears mandatory,<sup>3</sup> and possibly for others that are unimportant in foreign trade and might be most effectively handled through purchase programs or other support measures. For other commodities and particularly those entering into international trade, the program might be based largely on competitive pricing and income supplement payments. Further, should a comprehensive program of international commodity agreements be developed in the post-war period,<sup>4</sup> a combination program would have still greater latitude. This is especially true if the partial use of price support measures were desired and the mandatory loan provisions retained.

### *A Suggested Proposal*

If it is assumed that the United States will move in the direction of active international collaboration with other countries in both the economic and political field in the post-war period, there would appear to be little question about the type of price policy that should be adopted for agriculture. It must be consistent, if possible, with foreign trade policy; otherwise the United States will be in a position of encouraging, if not leading, a move toward increased economic isolationism. In examining the three general alternatives, it appears obvious that the programs for maintaining the price economy for agriculture on a strictly support or domestic basis do not meet the test of a constructive foreign trade policy. On the other hand, certain commodity situations, as well as existing legislation, would appear to preclude a general adoption of competitive pricing with income payments at this time. The a priori method of approach to the problem of "a price policy for agriculture, consistent with economic progress that will promote adequate and more stable income from farming" leads to the conclusion that it should be a combination type program—price support for such products as are legally required or can most

<sup>3</sup> The six basic commodities: Wheat, corn, cotton, tobacco, rice, peanuts (for nuts) and also the so-called Steagall commodities: Hogs, eggs, chickens (with certain exceptions) and turkeys, milk and butterfat, dry peas of certain varieties, dry edible beans of certain varieties, soybeans for oil, peanuts for oil, flaxseed for oil, American Egyptian cotton, potatoes, and cured sweetpotatoes.

<sup>4</sup> An inter-American Coffee Agreement, also an International Memorandum of Agreement for Wheat are already in effect and international discussions on cotton have been taking place recently.

effectively be handled by this method and competitive pricing with income supplements for the bulk of the remainder of agricultural production. Such a program could have many of the broader objectives carried out in a variety of ways.<sup>5</sup> Brief comments on the main features follow.

### *1. Administration of Program*

A combination type program would permit flexibility and adaptability to commodity and regional problems, which are so necessary in the United States, with its many agricultural regions and wide variety of crop and livestock production. The program could be administered largely by existing<sup>6</sup> agencies and field offices, particularly state, county, and community committeemen. These committeemen have been handling such activities as local approval of dairy feed and beef cattle subsidy payments, the authorization and approval of many conservation practice payments, and similar administrative activities. It is also proposed that the program be combined with the present AAA conservation payments. In this way there would be one general Congressional appropriation for conservation practices and income supplements and one administrative organization already functioning to handle the job. Conservation practices and income supplements are basically allied in maintaining and strengthening the farm economy.

With regard to financing, annual appropriations would be based upon a program developed in the public interest. The protection of land resources is a permanent defense type program, while payments to farmers in lieu of higher prices to the public, especially in the adjustment or reconversion period, are only a form of price and should be so recognized. The monies spent on agricultural conservation during the past decade have paid real dividends in food production in the war period. Recent state surveys of conservation needs, especially for the next 5 years, have been challenging. Furthermore, such a program would benefit every one of the 48 States to a significant extent during the coming years, a

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<sup>5</sup> Few details are given in this statement because of the need for brevity.

<sup>6</sup> Proposed reorganizations in the Department of Agriculture, especially of CCC and AAA should further facilitate the effective handling of this type of program.

feature that should favor both the adequacy and the stability of the appropriations.<sup>7</sup>

Once the appropriations were made to the Department of Agriculture, the monies would be distributed through established administrative procedure to the respective states which in turn would make payments to farmers. The formulae now used in allotting conservation practice monies to states could easily be revised to include monies for farm income payments. In addition to the present application by farmers for conservation practice payments, a record of farm production with information on sales, costs, etc., would also be included. The farmers' application, after examination and endorsement by the local committeeman, would be forwarded to the state AAA or fiscal office where established rates for conservation practices and income supplement payments by crops would be used to compute the total payment to farmers. Crops for which support programs were in effect would have little or no income supplement.

## *2. Parity Revisions*

The concept of developing parity relationships among the various parts of the national economy, such as agriculture, labor and industry, is implicit in the suggested proposal. It would emphasize parity in the form of income and general purchasing power, and it would provide for adjustments and sufficient flexibility to reflect changes in cost and demand conditions for any farm commodity. At the same time it is recognized that Congress has already enacted certain parity legislation, and that there is a considerable legislative record and established opinion on parity to be taken into account. Two courses of action appear possible with respect to parity revision: (1) scrap existing legislation and revise the parity concept, and (2) amend present parity legislation. The latter method, with a minimum of revision, is suggested at this time as the more likely to produce timely results.

<sup>7</sup> In case of inadequate appropriations or if directed by Congress, it should be possible to raise part of the monies through individual commodity self-financing programs, e.g., wheat certificate plan, etc. Should the appropriations exceed the amount needed to assure a parity farm income, due to above normal yields or high market prices, Congress could direct the disposition of such monies. When budget estimates must be submitted well in advance of the year to which they apply, normal yields and prices would probably be assumed.

Recognized problems with existing parity legislation and procedure include the inflexibility of the formula as written, the inequities among commodities when a fixed base is used and the changing position for many commodities since 1909-14, particularly with respect to technological developments in production and shifts in market demand. In order that the difficulties may be more satisfactorily met, it is proposed that Section 301(a) of the Agricultural Adjustment Act of 1938 be amended to include changes in conditions of production or consumption as additional factors in determining parity relationships with the 1909-14 base period or in selecting a new base period. For the purpose of reviewing and revising parity prices or income relationships as needed, a Parity Price Board would be established.

The amendments should go a long way toward making it possible to cut the Gordian knot of a fixed price base with fixed relationships among the individual commodities. Parity relationships both price and income should be kept under constant review, and this would be a primary function of the Parity Price Board. It would make studies and investigations, also hold such hearings as necessary before making revisions in a base period or parity relationship. A great deal of progress could be made in adjusting commodity parity problems, and in turn, formulating programs for the early post-war period before the impact of adjustment would be calling for emergency action and controls, were the Board to be formally established within the next few months. It would relieve Congress of a very thorny problem, at an opportune time, yet Congress would retain ample control over all authority delegated to the Board by virtue of the annual appropriations required for parity income payments. Should Congress also decide that general stabilization activities for the national economy be continued in the post-war period, i.e. maintenance of general parity income relationships among labor, agriculture and industry, the Parity Price Board for agriculture could become a working part of such a national program.

In determining parity income payments for farmers, the individual commodity parity figure, yields, market prices, conservation activities, and special regional factors would be considered. An income payment program permits flexibility of procedure and simplifies the administration of many individual commodity parity problems. For many commodities the supplemental income

might well be in the form of acreage or conservation practice payments in lieu of a price payment. Revisions in commodity parities resulting from changes in market demand or technological developments affecting costs would also affect parity income and assist in implementing adjustment programs. Expanding demand that requires additional incentives for production would call for some upward revision in the parity income for that commodity.<sup>8</sup> Yields are a very important factor in farm income and would be taken into account in making payments—either deviations from normal or the use of normal yields provides a measure of income assurance and stability for farmers. Regions likewise have differences in costs and in the parity income relationship of agriculture, labor, and industry. Where important variations were noted, this fact could be readily taken into account in establishing farm parity income.

### 3. *Consumer Benefits*

There are several ways in which the suggested program emphasizes increased production and benefits consumers as well as producers. Consumers and industry benefit from price levels that encourage a maximum utilization of agricultural production. The possibilities of the expanded use of food products have been well shown during the war period. The problem of adjustment of production to post-war requirements will be greatly aided if consumer demand can be satisfactorily maintained, particularly for such items as meat and dairy products that involve extensive acreages for feedstuffs. Likewise, should prices permit the continuation of the use of significant amounts of products such as grain for alcohol for synthetic rubber or other industrial uses, the demand for agricultural production would be still further increased.

Producers are also consumers. A considerable part of the farm population has a very low standard of living. An increased farm income and the stability it affords, should greatly aid in improving the consumer position of such farmers. Not only can farm consumption be expanded considerably for many products but the farmer's ability to buy other agricultural products in the form of

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<sup>8</sup> Such a revision in income might be effectively obtained by revising the commodity parity price or by including an incentive payment for increased production as part of the farm income supplemental payments.

food, textiles, etc., can be increased—a development that would help the social and economic position of the country generally. A healthy agriculture will also contribute greatly toward maintaining a high level of employment in industry through its ability to buy the products of industry. Again, consumers should benefit in many cases from adjustments made in parity prices and income supplements resulting from technological gains or changes in market demand.

#### *4. International Relations*

The suggested proposal should greatly assist in the development of a constructive foreign trade policy in the post-war period. Together with other measures already adopted<sup>9</sup> the United States could effectively cooperate with other nations in efforts to expand trade, improve economic and social conditions and raise living standards generally. The trend of farm prices especially of the major commodities in other surplus producing countries is expected to be mostly upward during the post-war period. Varying degrees of inflation, increased labor costs, and a generally rising standard of living should help to narrow some of the present commodity price level disparities between the United States and other surplus agricultural producers. Likewise, negotiated prices in international commodity agreements should strengthen prices through stabilization—dumping prices would be eliminated. As a result, the level of competitive pricing may rise and in turn the amount of income supplement payments could be reduced or largely eliminated over a period of time. Meanwhile in the important transition and early post-war period ahead, American agriculture under the proposed program of competitive pricing and income supplements, with support prices where necessary to carry out commitments under existing legislation, would have “a price policy consistent with economic progress that will promote adequate and more stable income from farming.”

<sup>9</sup> E.g., The Bretton Woods Monetary Plan, the United Nations Charter, the renewal of the Trade Agreements Act and the Food and Agriculture Organization.



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STABLE INCOME FROM FARMING

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LIKE the nation's entire economy, American Agriculture is headed for conversion from production for war to a production that must satisfy a very different domestic and foreign peacetime demand. Technological progress will continue unabated. It will make human labor more productive, and at the same time will tend to curtail the number of people employed in agriculture. Thus competition among farmers will become keener. The domestic demand for food and fibers will change in quality and volume for all products. Furthermore, America's farmers will encounter strong competition in the world market for their export products.

If transition to these very different conditions is not to lead to a serious agricultural depression and ensuing disturbances in industry, the federal government must pursue a policy of assistance to agriculture that is realistically devised and can be constructively executed. The farmer needs help in adjusting his production methods, costs, and output quickly to the changed demand if he is to succeed in providing the American people with abundant supplies of food and fiber at low cost, and keep in step with progress in agricultural efficiency elsewhere in the world in order to increase the national income by competitive farm exports.

In our free economy it is the farmer, in the last analysis, who has to make the adjustments. The government cannot and must not try to relieve him of this responsibility. Yet we realize certain political and social obligations to protect him against disastrous sudden losses in income arising from unpredictable price collapses. Whatever public planning is necessary to give this support must seek to strengthen the free private economy and must specifically refrain from advocating policies which would immediately or in the long run replace it by regimentation.

The present parity price support scheme will not protect the

farmer from severe losses in income, nor aid his adjustment from wartime to peacetime farming. The scheme is politically convenient, but it ignores the profound economic changes that have occurred in production and consumption, at home and abroad, over the last thirty years. Its continued use will lead either to the loss of all our export markets and radical curtailments of production, or to a two-price system in which consumers at home will be charged high prices while the same products will be dumped on the foreign market at low prices. Each of these results is detrimental to our national welfare, and each requires the regimentation of production.

Under the parity price system such vast surpluses of food will accumulate that either the price support policy itself will collapse and wreck the market, or quota restrictions on production and marketing will be imposed. The people of America, including the farmers, repudiate the notion of an economy of regimented scarcity; politically it contradicts all the tenets of American democracy, economically it wastes the great asset of opportunity to create abundance, and socially it discriminates against the weakest groups.

The parity price formula affords no protection against excessive income losses, because it ignores entirely the volume of production sold at the supported price. Therefore no "revised" parity price formula can possibly meet the critical needs of American agriculture in its reconversion to peace.

Therefore a policy is proposed which (a) underwrites from year to year a certain minimum farm income in order to cushion the shock of sudden and unpredictable declines in prices, without consideration to the individual crop yield hazard; and (b) that assists farmers to plan production by establishing price floors and production goals as guideposts to obtain the best possible income.

In discussions of this Equitable Farm Income Insurance Plan, "equitable farm income" shall be defined as the income from the market sale of an equitable volume of specified basic farm products at an equitable price. The "equitable volume" (or goal) shall be defined as that volume which can be absorbed in the market without leaving burdensome surpluses or serious shortages. The "equitable price," i.e., the insurable price floor, shall be defined as that price which promises to produce the equitable volume. heretofore defined.

The proposed Plan does not interfere with the market or with production by intervention or price-fixing of any sort, but is actually a scheme which concerns only two parties—the government as the underwriting agency, and the insured producers. It confines itself to a certain yearly minimum farm income insurance, and grants farmers a reasonable degree of economic security, which will also prove beneficial to industrial employment by underpinning the purchasing power and effective demand of farmers for industrial goods. The farm income shall not be insured on any basis of the past but according to the immediate future needs of the nation.

Because this Plan leaves the prices in the market free to find their level according to supply and demand, the domestic consumer will have the full benefit of a large supply. The farmer, in turn, will profit from the absorption of his products by both the domestic and export markets.

The Plan envisages the following basic measures: First, the Congress shall enact legislation assigning to a non-partisan Board of perhaps 12 members (appointed by the President and confirmed by the Senate) the task of administering this federal insurance of an equitable farm income at public expense. The Board shall be given power to establish always for one crop year specific production goals and price floors for certain basic crops, livestock, and animal products. Both goals and price floors shall be merely guideposts for the farmers and statistical tools for the Board to estimate the insurance of an equitable farm income. The price floors shall be immaterial for the market of such commodities. The commodities shall be sold freely at whatever price they will fetch.

When equitable prices are determined, the chief emphasis shall be laid upon the proper price relations between competitive commodities, because these relations will be a more powerful guiding device for production than the specific price level as such.

Since this task of determining goals and price floors to assure fulfillment consists of objective economic decisions, it can be kept free of political considerations. Since the Board shall be bound to set goals at such levels as to avoid shortage and surplus, it must ultimately conform to the decisions and preferences people express in dollars and cents in their daily plebiscite.

The Board shall announce the price floors not later than August 1 of each year, in order to give the farmers opportunity to shape their crop plans accordingly.

The Board shall estimate the total risk of underwriting the price floors and report to the Secretary of the Treasury the maximum amount of funds needed to pay the "equity" to farmers, i.e., the indemnity for an income from insured commodities at prices below the insured price floors.

The Secretary of the Treasury shall ask the Congress for an allocation of funds sufficient to pay the indemnity. This fund shall serve exclusively as an insurance fund. Whatever remains of it after indemnification at the end of a crop year shall revert to the general treasury. The annual fund will be used approximately two years after allocation by the Congress, since allocation must be made before goals and price floors can be announced, while payments will be made at the end of the second year, when the crops of the preceding year have been sold.

All dealers in agricultural commodities shall be obliged by law to issue sales certificates in triplicate to farmers concerning the sale of any commodities for which the government underwrites a price floor. Such certificates shall state the name and address of the producer and the buyer, the quality and quantity of the product, and the price at which it was sold. The original and second copy shall be given to the farmer, the third copy to be retained by the dealer.

The Board shall collect all original sales certificates and determine the volume, the average actual price per unit received by the farmers, and compute from them the total income actually obtained from each commodity. If that income is found to be below the insured equity income, the Board shall determine the difference in percent of the insured sum and pay all certificate holders that percentage of their actual receipts from sales as indemnity.

*Example*

Goal.....	1,000,000,000 bu. of wheat
Insured equitable income price.....	\$1.00 per bu.
Insured income.....	\$1,000,000,000.00
Actual sales.....	1,200,000,000 bu. of wheat
Average price.....	\$.80 per bu.
Actual average income received from sales.....	\$960,000,000.00
Equity.....	\$40,000,000.00=4.1 percent of actual income

Each holder of sales receipts will obtain a cash payment of 4.1 percent of the value shown by his receipts.

A given farmer thus may sell 1,000 bushels of wheat, actually

receive \$.60 per bushel for it, or a total income of \$600.00. The income insurance due him would then be \$24.60.

The plan requires far less government personnel than the parity price policy now in force. The Board would need a planning staff to determine the equitable prices and the goals. Much of the necessary economic analysis could be delegated to the Bureau of Agricultural Economics and other offices in the Department of Agriculture. The collection and calculation of the certificates and payments demand an efficient accounting staff.

The Plan's best feature is that it neither subsidizes overproduction nor diminishes the producer's incentive to reduce his costs or to sell at the best price he can get in the market. As the example suggests, the equity payment per bushel declines the more the goal is overshot, since the Plan insures the general farm income from a commodity, and not a definite price emancipated from volume of production.

It is therefore probable that in the case of a bumper crop, the insurance fund will be spared a heavy drain, although the market price would decline below the floor. This, however, is as it should be. The lowering of the market price has the advantage that it permits a maximum utilization of the crop, eliminating the necessity for huge government carryovers of stocks, and that it makes it plain to producers that a smaller crop may yield a better net return.

On the other hand, the plan does not interfere with a granary policy if the government desires to accumulate stocks. Such purchases would lift the market price, reducing or eliminating the equity payments to farmers.

The Plan does not interfere with technological progress. If farmers manage to produce at lower costs, they derive the full benefit from it. If all farmers substantially overshoot the goal, owing to better production methods for one commodity and thereby lower the market price far below the floor, the insurance fund is still relatively well protected by the provision that it insures only the total income from a commodity for one year. The Board in such a case would naturally lower the insured price the following year.

As in the case of all insurance, the Plan involves a certain risk for the government in underwriting a certain income. The risk element lies in errors of judgment by the Board. The Board may

err when it sets either the goal or the insured price. However, the Plan has a great advantage over the present price support policy in this regard. Such errors can never have the financial consequences for the government that are now entailed, because the insurance of prices for several years in advance on a historical basis is a rigid commitment without any safeguards. In this connection, the extent of financial obligation under the Plan can be computed within reasonable margins and can be revealed to the public. On the other hand, the needless loss to consumers who have to purchase in a market with quota restrictions and pegged prices is not calculated or made public, to say nothing of the net loss in real income incurred by the producers of agricultural products in the loss of exports and increased overhead costs owing to restricted output.

The greatest misfortune that can possibly befall agriculture under the Plan would be a combination of factors in the world market that caused the price of one or several commodities in one crop year to fall to a level of, say, half the price floor. If this were to happen, the government would be faced with an agricultural crisis in any event. It would have to adopt a stop-disaster action program. To avoid payment of an excessive indemnity, it would probably purchase a sufficient volume of the commodities in the open market to check the price decline.

The direct costs of the Equitable Farm Income Insurance Plan to the taxpayer will be far lower than those incurred under the parity price policy, which looks to the past. Indirectly, the Plan would create a substantial net balance in favor of the taxpayer, because by its year-to-year orientation to the future it would lead to a self-adjustment of agricultural production, a curtailment of food and fiber costs, and a prosperous export trade, instead of the permanent subsidization of production oriented at prices 30 or 20 years old.

The plan should be made effective upon the expiration of the present standing commitment of the Congress enacted in the so-called Steagall Amendment, so that as soon as the support policy of parity prices or comparable prices ceases, the equitable income insurance will begin.



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WITH ECONOMIC PROGRESS, THAT WILL  
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STABLE INCOME FROM FARMING

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THE GRAND objective of agricultural price policy since 1933 has been the achievement of that relationship which existed between individual agricultural commodity prices and all other prices from 1910-14. The mechanics of achievement have varied, and the base period has been redefined for certain commodities, but the quest for the current realization of a favorable historical price relationship has never faltered. Within the framework of this policy prices have come to be regarded primarily as *implemental tools for the maintenance of income*; the function of the price system as a mechanism for directing continuously and efficiently the use of productive resources to meet changes in consumer demand and changes in production techniques has been reduced to a subsidiary role.

The parity concept as applied to individual commodities is unsatisfactory in that instead of fostering basic shifts in agriculture to meet new circumstances, it tends to remove the incentives for adjustment and perpetuates, even accentuates, fundamental maladjustments. A series of measures are proposed in this paper designed to encourage agriculture to change with the times, to minimize the human suffering involved in making adjustments, to minimize the actual size of the adjustments required, and to sustain farm incomes at a level comparable with those received in alternative occupations. The proposals, moreover, will benefit all consumers, particularly those in the lower income brackets.

*The Function of Prices*

Inasmuch as a governmental price policy for agriculture will be proposed in this paper, it should be worth while to review very briefly the operation of the price mechanism. Looking at the question from the standpoint of the individual, it is evident that the prices which a producer receives for his product, taken with the prices he must pay for the goods and services which go into its

production, that is, his costs, are the major determinants of his money income. What this money income is worth in terms of other goods and services depends in turn on the prices of these items. The importance of prices as real and money income determinants is widely understood because it touches closely the everyday task of making a living. It is this concept of prices which underlies the present parity price policy for agriculture.

There is another function which the price mechanism performs, however, which is not well understood. In a free enterprise economy prices are the signals which tend, through their direction to producers and consumers, to equate the quantity of a commodity produced with the effective demand for it. A high price for a particular good serves notice to producers to direct, if possible, more energy and resources into its production, and conversely, warns consumers that it is scarce and to use less. Similarly, a low price stimulates greater consumption of the product and at the same time discourages its production. This equilibrating function of prices is blocked, however, by the parity formula, since the formula does not take cognizance of changes in demand on one hand and changes in supply on the other.

#### *Parity Prices Examined*

The income maintenance aspects of agricultural price policy have been paramount in recent years and have dominated most wartime legislation concerned with farm prices. The Stabilization Act of 1942 and consequent amendments provide that farm prices for the basic commodities (corn, wheat, cotton, tobacco, rice, and peanuts for nuts) shall be supported by producer loans at 90 percent of parity, except cotton which shall be supported at 92½ percent of parity (except with respect to cotton harvested after 1943 but planted before 1945, 95 percent of parity). Moreover, the Government has committed itself to support the prices of basic commodities for at least two years after the war. With respect to the Steagall commodities (those commodities for which the War Food Administrator has requested an expansion for war purposes) the law also provides for price supports for at least two years after the war, at not less than 90 percent of parity or comparable price.<sup>1</sup>

Now placing a price floor under the principal agricultural commodities at 90 percent of parity takes no account of the demand

<sup>1</sup> For a succinct discussion of agricultural price support legislation, see the paper by Robert H. Shields entitled *Federal Statutory Provisions Relating to Price Support for Agricultural Commodities*, U.S.D.A., 1944.

for particular commodities and the question may be asked—Is the heavy current demand for food, domestic and foreign, likely to fall off sufficiently within the two years following the end of the war so that the Federal Government will be required to make good its commitment to support farm prices? It is impossible to give a precise answer to that question. But it does seem safe to assume that the heavy wartime demand for food and fiber will decline significantly with the cessation of lend lease and war-relief feeding regardless of the level of domestic economic activity. If, further, the Federal Government is committed to support agricultural prices at 90 percent of parity at that time, it seems likely that agricultural prices for certain commodities will come to rest at the support level—thereby creating a surplus condition in those commodity lines. Again it is difficult to name specific commodities, but the following seem likely candidates for any surplus list—cotton, eggs, wheat, peanuts, and potatoes.

The above conclusion is based upon the operation of three causal factors, any one of which or some combination of which might be at work in the case of a particular commodity. First, the total demand for certain agricultural commodities in their respective base periods, from which the parity relationship is derived, included a larger volume of exports than is likely to occur in the long-run post-war period (e.g., cotton). Second, in the case of certain agricultural commodities costs of production have declined to a level where it is more profitable to produce the commodity than it was in the base period—thus, more product is forthcoming. Third, farmers are slow to reduce their output as prices decline. Hence, they may well maintain production in an attempt to maintain their incomes, as commodity prices decline to the support price level.

#### *Price Policy Proposed*

With certain reservations and necessary adjuncts, which will be pointed out later, agricultural policy in the post-war period with respect to prices should be *to permit each commodity price to seek its own level*. It necessarily follows then that the Federal, State, and local governments should act to modify their institutions, customs, and practices to facilitate price-equilibrating adjustments. Specifically, this means that the Federal Government should discard the now current parity price formula, and make no further attempt at price-pegging or fixing when the Steagall and basic commodities commitment is fulfilled.

On the surface the above recommendation may appear conservative. And it would be if nothing further were done to insure equality for agriculture with respect to per capita incomes, but such is not the case, for two income stabilizing programs will be suggested as an integral part of the price proposal. It is simply held that the pricing mechanism is so complex and so necessary to the rational use of resources that any tinkering with it is likely to lead to further maladjustments. This is so because the customs and institutional arrangements of related markets are infinitely varied—changes in demand, supply, and price are continually occurring—hence, nothing less than omniscience is required of a price-regulating agency. Further, on the basis of past experience it is clear that a central agency, charged with the responsibility of managing prices in a capitalistic society, would be so pressured by producer groups for special concessions that a rational management of prices would be impossible. Price control must become a political football with those groups aggregating the most power in moments of decision receiving the most advantageous relative prices.

Even though we as a nation are desirous of regaining the efficiencies that flow from a free market mechanism, most persons are not disposed to return to the *laissez-faire* philosophy of the nineteenth century. There appear to be better ways of effecting adjustments than through starvation on one hand and the amassing of huge fortunes on the other. It is contended that the Federal Government should and must take steps to ease the economic adjustment process (1) by mitigating the economic vicissitudes to which producers are subject and (2) by helping producers effect adjustments. Therefore, it is recommended that two programs or sets of programs be developed as adjuncts to the price policy recommended above:

- (1) A Food Discount Plan designed to raise the level of food consumption of low-income people,<sup>2</sup> and
- (2) a production-adjustment program designed to assist inefficient producers shift into other enterprises or nonfarm pursuits.

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<sup>2</sup> Other programs, such as School Lunch, In-Plant Feeding, and Nutritional Education, should accompany the Food Discount Plan.

*A Program of Consumption-Adjustment*

The food discount idea is not complex. Whenever the income of a consumer unit (families or single individuals) falls to a point where the "normal food expenditure" of the unit is less than the total cost of a good adequate diet,<sup>3</sup> the consumer unit would be sold at discount a food currency book or books sufficient in total value to purchase the good adequate diet. And in no case should the discounted price of the food currency book or books sold to the consumer unit exceed the "normal food expenditure" of the unit. For example, if a consumer unit of four persons with an annual income of \$1,000 spends \$360 per year for food, but the good adequate diet costs \$500, then the consumer unit would be sold a food currency book or books valued at \$500 for not more than \$360, or at a discount of at least 28 percent off the retail value of the books. By this procedure the consumer unit must spend for food an amount equal to the subsidy plus the "normal food expenditure." Hence, the demand for all foods would be maintained at the good adequate minimum regardless of the income status of consumer units.<sup>4</sup> This does not mean that the demand for each food item would be maintained. Such stability would occur only if consumer tastes remained constant. But the total demand for food would be maintained, and thus operate to stabilize agricultural prices—operate to reduce the amplitude of price fluctuations to which agricultural producers have been subjected in the past.

The size of a comprehensive food subsidy program to low-income consumers would vary with the level of national economic activity. If something approaching full employment were realized the program would be modest in size. But as the economic situation darkened, the size of the program would necessarily expand as more and more consumer units experienced low incomes, hence became eligible to participate in the program. It has been estimated, for example, that as of 1950 with a total population of 144 million, and a net national income of 125 billion dollars in 1943 prices, supplemental consumer expenditures for food amounting to 1.4 billion dollars would be required to provide all individuals

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<sup>3</sup> Equal in all respects to the "Moderate Cost Diet" recommended by the Bureau of Human Nutrition and Home Economics, U.S.D.A.

<sup>4</sup> This idea could easily be extended to include cotton and wool products.

in consumer units of less than \$1,000 income per year with good adequate diets.<sup>5</sup>

### *A Program of Production-Adjustment*

An agricultural price policy which would permit individual commodity prices to seek their own level should be complemented with programs designed to help producers shift out of production where average variable costs exceed equilibrium prices for the commodities involved. A means or mechanism must be developed which (1) helps producers shift into new enterprises with a minimum of pain and sacrifice, and (2) permits the reduction in costs flowing from technical innovations to be passed on to the consumer in the form of lower prices.

A downward graduated income payments plan is first proposed to assist agricultural producers adjust their operations from a support level to a free market situation. The payments under this plan are designed to provide an umbrella under which production shifts might take place. To compute such an adjustment formula the following data are required:

1. Average physical volume of production of each commodity on each farm for the years 1939, 1940, and 1941.
2. The parity price of the commodity in the current year.
3. A reduction factor—for example, 100 percent for the first two years after the war, 75 percent for the third year, 50 percent for the fourth year, 25 percent for the fifth year, and 0 percent for the sixth year.

The formula for a given commodity, say for the first year after the war might be written as follows:

$$\left\{ \begin{array}{c} \text{base period pro-} \\ \text{duction in} \\ \text{physical units} \end{array} \right\} \cdot \left\{ \begin{array}{c} \text{current} \\ \text{parity} \\ \text{price} \end{array} \right\} \cdot \left[ (.90) - \left\{ \begin{array}{c} \text{pct. of parity of} \\ \text{commodity in} \\ \text{first year} \end{array} \right\} \right] \cdot 100\% = \text{payment}$$

In each succeeding year the then current parity prices, percent of parity, and a new reduction factor would be substituted into the formula.

If the percent of parity of the commodity produced in the base period goes above 90, the producer receives nothing, but if the percent of parity falls below 90 he would receive a payment in accord with the formula. The important point is that the farm operator is encouraged to produce in the period immediately following

<sup>5</sup> Estimates taken from a Ph.D. thesis submitted to and accepted by Harvard University, March 1945, by Willard W. Cochrane, entitled *The Problem of Achieving a High Level of Food Consumption in the United States*.



the war the commodity on which he feels he can make the greatest return, given the equilibrium price pattern and production costs on his farm—he is not tied to the commodity in surplus to receive a benefit payment. If, for example, the world price of cotton should fall to 9 cents and it costs a particular farmer 11 cents to produce cotton, he knows he will lose money in the free market, and it would be to his advantage to shift to some other enterprise. And to provide an incentive the benefit payments do not stop when he shifts—they simply run out with the passage of time. In brief, a cushioning period of five years or perhaps longer is provided to help producers adjust to the free market situation.

It is here that the second phase of the program comes into operation—the rehabilitation phase. If it can be ascertained that the producer of a given commodity, while losing money at the world price, does have some enterprise into which he can shift and there cover all costs including a managerial wage, then the Federal Government through a designated agency should lend money to the producer to enter that field. These loans should be supervised in much the same manner as Farm Security Rehabilitation loans. It is not sufficient to make a loan and return next year to collect interest and principal—these unfortunate farmers would require *patient guidance*, for they in effect would be learning a new trade under trying circumstances.

However, if it is ascertained that in the equilibrium situation a particular producer cannot on his farm reduce his average variable costs below the selling price in any commodity line, then the Federal Government through a responsible agency should stand ready to (1) purchase the farm (if the producer is an owner) at the going rate for that land in 1940, (2) offer to retrain the farmer in a trade school at Government expense—the stipend to vary according to the size of the family, and (3) actually provide the ex-farmer, assuming he completes the prescribed course of training, with a job.<sup>6</sup> Upon the provision of a new job to the displaced operator the Government's obligation would be concluded. The Federal Government is simply assuming the cost of introducing mobility into the economic and social system.

#### *Conclusions and Summary*

In this paper dealing specifically with agricultural price policy,

<sup>6</sup> Here it is assumed that the Federal Government will either (1) create a milieu in which private enterprise will achieve something approaching full employment or (2) create jobs through Government enterprise. For if the displaced farm operators cannot find new employment, the entire program breaks down.

it has been recommended that the monopoly elements granted to agriculture by Government be withdrawn, and that the prices of individual commodities be permitted to seek their own level. It is equally important that the monopoly elements in industry be combated so that monopoly profits arising out of controlled prices cannot arise. Agriculture should not be forced to operate under free market conditions while industry operates under monopoly conditions; such a recommendation would be unfair and unequitable. But because this paper is concerned with agricultural price policy, and because the problem of industrial pricing with differentiated products is so complex, the job of laying down the specifics of a price policy for industry has not been undertaken here.

Further, in addressing this paper to the topic of agricultural price policy a solution has been offered only to the problem of achieving an *efficient and rational* use of agricultural resources; *a cure-all for the ills of farmers has not been concocted*. The carrying out of the above recommendations in the agricultural segment of the economy and those inferred for industry will not assure, for example, full employment or eliminate secular trends in business activity. In short, the formulating and carrying out of a positive price policy does not eliminate the need for a positive policy with respect to fiscal operations, conservation, international trade, and many other related fields.

In summary, the agricultural price policy formulated in this paper has two broad aspects, one negative and one positive. First, the parity price concept adhered to by agriculture since 1933 must be junked, and with it all programs of the price-fixing, price-pegging type. Individual commodity prices should be permitted to seek their own level. Second, two general type programs must be included to mitigate the economic consequence of a free market system: (1) a consumption-adjustment program designed to provide consumers at all times with sufficient purchasing power to acquire the good adequate diet and (2) a production-adjustment program designed to help producers shift (a) into commodity lines for which they are more efficient relative to the pattern of equilibrium prices or (b) into nonagricultural pursuits, when producers discover they cannot cover their costs in their established commodities at equilibrium prices. These added programs will permit the efficiencies that flow from a free market to be realized by making a free market situation tolerable to the individuals involved.

*An Honorable Mention Paper*

**A PRICE POLICY FOR AGRICULTURE CONSISTENT  
WITH ECONOMIC PROGRESS THAT WILL  
PROMOTE ADEQUATE AND MORE  
STABLE INCOME FROM FARMING**

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**I** WISH to suggest and develop a five-point program that might be termed—a “middle way” approach to a sound price policy for postwar agriculture. This program would include:

I—Expanding emphasis on measures directed towards encouraging the use of, by voluntary means, educational opportunities and research procedures.

II—The use of a device similar to the British Wheat Act which permits prices of individual agricultural commodities to seek their market levels and provides for deficiency payments or reimbursements to be paid direct to producers for the difference between the market prices received and the minimum level of returns that has been guaranteed in advance.

III—The adjustments of these deficiency reimbursement levels from year to year between agricultural commodities by the use of a ratio between (a) the deficiency reimbursement level, and (b) the market price, which might be called “the support price-market price ratio.”

IV—The payment of deficiency reimbursements by the government only to producers following certain previously announced efficient production and marketing practices for individual agricultural commodities.

V—The expansion of the school lunch program and food stamp plan techniques for low income families in periods of general decreasingly serious. These dangers, as developed so thoroughly by Professor F. A. Hayek in his book, “The Road to Serfdom,” nutritional deficiencies is to encourage the utilization of grains in the form of livestock and livestock products.

***I. Expand Educational Opportunities and Research Procedures***

A sound program for postwar agricultural price or income policy must, in my judgment, give expanding emphasis to measures directed towards encouraging the voluntary use of price outlook in-

formation, efficient production and marketing practices, and provide for mobility opportunities on the part of individual producers. This education program should, of course, be coordinated with intensive research along these lines, not only by governmental agencies, agricultural experimental stations and colleges, but by corporations, cooperatives, foundations, farm organizations and trade associations.

It must be kept in mind that census data show that nearly 90 percent of agricultural production is produced on 50 percent of the farms. An agricultural price policy by itself can do very little to aid the 50 percent of the farmers who produce only 10 percent of the output. To help a sizable proportion of the "lower output" group, the price policy must be coordinated with educational and other employment service procedures to encourage the mobility of surplus workers from agriculture.

There is considerable merit to the view that, as society moves in the direction of increased planning and arbitrary controls, the dangers of regimentation and bureaucratic control becomes increasingly more serious. These dangers, as developed so thoroughly by Professor F. A. Hayek in his book, "The Road to Serfdom," added considerable support to those who advocate the "leave-it-alone" policy for postwar agriculture, and I for one, definitely lean in this direction.

It must, however, be recognized that the basic characteristic of agriculture makes it a somewhat separate and distinct problem from certain other segments of our economy in that, (a) the fertility of the soil is of direct concern to the entire economy; (b) that expanding populations in urban areas come largely from the surplus population on farms; (c) that low agricultural prices, at least in times of general unemployment, do not seem to encourage a rapid enough movement from over-populated depressed segments of agriculture; (d) that other groups of the economy at times operate on a curtailed output basis to the disadvantage of agriculture; (e) and that all of us have a serious stake in any segment of the economy when the situation is similar to that in 1932 when "tar and feathering" of judges and the march of thousands of farmers on Washington seemed to be endangering our entire political structure.

Also, we might as well be realistic about it—in view of the floor guarantees, subsidies and other controls that are already part of the legislation, and in view of the attitude of farm organizations

and farmers—there is little chance that the price policy of the future will be entirely free from these direct interventions.

For example, when Minnesota farmers, in a poll by the Minneapolis *Tribune* were asked, "Do you think the Federal government should or should not continue price controls on farm products after the war?," the majority favored continued controls despite the fact that the question did not make clear whether controls referred to floors or ceilings.

A realistic appraisal of recent platforms of various farm organizations also makes it clear that continued "parity" assistance (or a reasonable facsimile) is desired. However, it was rather significant to observe that in a survey made by the United States Department of Agriculture, published in May 1945, three-fifths of the farmers interviewed in the Corn Belt thought they should be permitted to produce whatever they pleased.

The new Secretary of Agriculture Clinton P. Anderson, in a talk on July 11 before the Advertising Federation of America, lent his aggressive support to a definite governmental price support policy at least for the reconversion period after the war by saying, "I want to see the government fulfill its promises on price supports to the farmers . . . since Congress and the Department of Agriculture have been promising that for some time after the war prices will be supported."

In a talk by Representative Clifford R. Hope at the American Meat Institute Convention last year, he stated he was convinced that support prices for agricultural products in some form or another would be continued as a national policy.

Therefore, it is the job of every agricultural economist to devote considerable thought and effort to procedures for making such controls conform to economic considerations as closely as possible and to see that they result in benefits to our entire economy. These are the main objectives of the suggestions outlined in this paper.

So much has been written and said about the short comings of "parity" as defined in the Agricultural Adjustment Act of 1933 and as repeated in subsequent acts that there is little to be gained by a review of all of its weaknesses. Even farm organization leaders have from time to time publicly admitted the inadequacy of the prevailing basis for agricultural price policies, but have countered critics with the practical phrase "give us something better." The views that follow are a sincere effort to meet this challenge.

II. *Allow Farm Prices to Seek Their Market Levels  
but Supplement Them with Deficiency  
Payments to Producers*

As a means of making governmental procedures conform to economic considerations as closely as possible, and as a means of avoiding the serious weaknesses in the present parity price program, I subscribe to the use of a device similar to that used in the British Wheat Act. The act permits the price of each agricultural commodity to seek its market level, based on existing supply and demand conditions. It provides for deficiency reimbursements to be paid direct to producers for the difference between the market price received and the minimum level of return which is assured in advance, if market prices are below the guaranteed level. In other words, if the support price of wheat is \$1.00 and the market price is \$0.75, producers are paid the difference of \$0.25 a bushel by the government.

This device already has received considerable support. In a comprehensive report by the Committee on Postwar Agriculture Policy of the Association of Land Grant Colleges and Universities, entitled "Postwar Agricultural Policy," published in October, 1944, this procedure was suggested as a basis for the orderly tapering off of wartime production incentives.

In his report to the President, Secretary of State James F. Byrnes, then Director of War Mobilization and Reconversion, on April 1, 1945, stated: "Situations may arise . . . in which it would ultimately cost the government less, and be to the long-time interest of the producers, to permit the prices to decline below the authorized support level, and make up the difference with direct government payments."

Secretary of the Treasury Fred M. Vinson in his report to the President, the Senate and the House of Representatives on July 1, 1945, repeated Secretary Byrnes' statement and urged that this idea be given most thorough study and pointed out that: "If the government makes this payment direct, it has the advantage of permitting the consumer to get more for his money, thus encouraging increased consumption. It allows farm prices to reach their natural level and thus puts the farmer in a better position to compete in the foreign market." Furthermore, it would tend to minimize the encouragement given by the present parity supports toward the use of substitute products on the domestic market (rayon versus cotton).



Secretary Vinson also pointed out "surplus payments can be so adjusted that farmers can be steered away from those crops which are not profitable to produce."

Then too, a significant fact is that dairy farmers, and more recently cattle and sheep producers and feeders have worked with government agencies on programs designed to make subsidy payments to them, thus showing their willingness to be on the receiving end of such payments. Much of the experience and administrative technique gained through the payment of subsidies direct to producers readily can be applied to making deficiency payments direct to producers.

### III. *Adjust Deficiency Payments Between Commodities by the Use of the "Support Price-Market Price Ratio"*

This brings us to one of the major objectives of this paper which is to present an easy-to-understand, workable plan for making these adjustments. I propose that the adjustments of these deficiency reimbursement levels from year to year between agricultural commodities be made by the use of a ratio between (a) the deficiency reimbursement level, and (b) the market price. This device might be called, "The Support Price-Market Price Ratio."

To illustrate—let's make the arbitrary assumption that the guaranteed price of hogs, calves, and of lambs in any one year would be \$10.00 per cwt., and that the market price of hogs that year turned out to be \$7.50, the market price of calves \$10.00, and the market price of lambs \$12.50 per cwt. The next year's guaranteed level of returns would be adjusted downward in the case of hogs, remain the same in the case of calves, and adjusted upward in the case of lambs. Further adjustments would be made in subsequent years, all hinged on the relationship between the actual supply and demand market price and the new support level that had been assured to producers.

Legislation might provide that in no event should the adjustment be more than 10 or 15 percent upward or 10 or 15 percent downward in any one year and consideration should be given to the use of a one year lag between the price ratios used and the guaranteed support. This would permit the use of the technique of "forward pricing" and would, for example, assure hog producers, prior to the farrowing season, of a minimum level of returns on hogs for the following years.

This procedure would automatically adjust for changes in de-

mand for a particular commodity and for changes in the cost of producing a particular commodity (serious weaknesses of the present parity price formula) and would have the distinct advantage of making price changes gradually, thus giving producers time to make their required production adjustments. It also has the outstanding advantage of being automatic and thus not subject to the many pressures that always influence administrative judgment.

The *over-all* return to agriculture might still be related to some minimum net income parity formula, preferably one of relative real income between urban and rural groups rather than parity price relationships or possibly one related to the level of land values. This is one of the serious weaknesses of the present "parity income" concept since, as the Land Grant College Committee states "there is a constant tendency for advantages such as accrue from higher farm prices and farm incomes to be capitalized into higher farm land values . . ." or to encourage more persons to remain on farms than necessary.

In any event the commodity price adjustments as outlined earlier should be made first and then if it is found that over-all level would have to be raised a certain amount to maintain the real income to agriculture all individual supports could be increased by the apportionate amount. On the other hand, if the net real income relationship of agriculture improved, or if land values started to rise, all adjusted supports would be decreased by the same proportion.

#### IV. *Pay Deficiency Reimbursements Only to Producers Meeting Efficient Production and Marketing Practices*

It is my strong conviction that these deficiency payments, wherever possible, should be made only to those producers meeting certain standards of efficiency in their production. In this way our entire economy will benefit from funds so expended and consumers, as well as producers, will share in the benefits of increased production. This would help assure continued public and congressional support for funds to cover the cost of the program.

The technique for paying producers for desirable soil building practices already has been fairly well explored. This could be expanded to paying livestock producers for more efficient production and marketing practices. As a basis for procedure, and in order to prevent the program from becoming too centralized, consideration should be given to the use of state committees made up of agricultural experiment station officials, AAA representatives, county

agents and others to determine the desirable practices for their state and the proportion of the deficiency payment that would be paid for each practice.

Agricultural colleges and experiment stations already have developed lists of various desirable production and marketing practices for both crops and livestock, and the deficiency payments could be set up on a scale that would provide an incentive on the part of individual producers to follow these specific and desirable practices.

It is true that when the market price is above the support level no additional benefits will be derived on the part of those who follow such desirable practices, but they will still gain from the advantages of observing efficient economic production and marketing methods.

#### *V. Expand School Lunch Program and Food Stamp Plan Techniques*

As a final step in a sound postwar price policy for agriculture, consideration should be given to the expansion of the school lunch program and food stamp plan techniques for low income families, especially in periods of high unemployment and general depression. This technique not only aids those groups having "the highest propensity to consume," but if used to encourage the utilization of grains in the form of livestock and livestock products, would be one of the effective ways of preventing the accumulation of grain surpluses, and at the same time correcting nutritional deficiencies. The plan has the additional merit of not interfering with normal price making functions and marketing practices and can be easily coordinated with the programs outlined in earlier sections of this paper. For a thorough development of this plan, reference should be made to the pamphlet, "A Food and Nutritional Program for the Nation" published in May, 1945, by the National Planning Association.

Agricultural price policy during the postwar period should, I think, be designed to conform as closely as possible to the pattern outlined by Colmer Committee Report on "Postwar Economics Policy and Planning," published in September, 1944, which states, "for the attainment of postwar prosperity we must look primarily to the efforts of private enterprise, its management and its labor forces. The role of the government is essential to provide the setting in which these efforts have the best prospects of success. At the

same time it is the obligation of the government to take direct public measures for the protection of its citizens against the economic hazards which are unavoidable in a progressing economy that preserves freedom of private enterprise and individual opportunity."

The agricultural price policy of the future also must be established with the recognition that neither agriculture, labor nor industry can solve its own problems without giving thorough consideration to the problems of the other groups and to the welfare of our entire economy. As Professor O. B. Jesness in his talk at the National Farm Institute in 1944 pointedly put it, each group must recognize that the best way to obtain a larger slice of the national income pie is by making the pie larger, rather than by taking selfish steps to obtain a larger portion of a smaller and smaller pie. What we so desperately need is a domestic "reciprocal trade program" between industry, agriculture and labor designed towards the goal of full production and full employment through private enterprise, and a sound agricultural price policy would be an important step toward this goal.

To summarize, the five-point program outlined in this presentation has attempted to take into account, not only the economic aspects of the problem, but also its political and administrative aspects. It is clear that any program designed to correct the weaknesses of the existing parity price policy must not only conform to sound economic principles but must be politically feasible. Thus, the proposals to:

- I—Expand Educational Opportunities and Research Procedures,
- II—Allow Farm Prices to Seek Their Market Levels but Supplement Them with Deficiency Payments to Producers,
- III—Adjust Deficiency Payments Between Commodities by the Use of the "SUPPORT PRICE-MARKET PRICE RATIO,"
- IV—Pay Deficiency Reimbursements Only to Producers Meeting Efficient Production and Marketing Practices, and
- V—Expand School Lunch Program and Food Stamp Plan Techniques,

Constitute the framework of a "middle way" approach to post-war agricultural price policy.

*An Honorable Mention Paper*

A PRICE POLICY FOR AGRICULTURE, CONSISTENT  
WITH ECONOMIC PROGRESS THAT WILL  
PROMOTE ADEQUATE AND MORE  
STABLE INCOME FROM FARMING

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*Introduction*

IT IS conceded that the Steagall Amendment which involves price supports at a high percentage of "parity" prices for two years and possibly nearer three years after the war with Japan is ended will create difficulties for the Government and eventually for farmers. Changing these provisions to give farmers lower prices than those guaranteed or to put limits on production will be construed by the farmers as an act of bad faith on the part of the government comparable to an abrogation of contract obligations with manufacturers. Some plan should be devised to fulfill these obligations as to farm income and yet to prevent any prolonged maladjustment to agriculture. The best solution may be a subsidy payment to farmers to make up the difference between guaranteed parity prices and actual average open market prices during the 2 or more years involved on actual average wartime production for each farm. The farmers could then adjust their acreage and production to suit market demands. Some compromise on loans, making them flexible from 50 to 75 percent of parity might be feasible if put through by farm organizations. This paper does not propose to give a complete solution to this immediate postwar problem, but rather to outline a plan for stabilizing agricultural production and income at an adequate level which will permit during the next decade a continuing development of efficiency in the industry and a continuing adjustment to permit servicing of demand in all markets available. This plan should function until evolution of conditions, regulatory institutions, and accumulating data makes a more ideal plan understandable and acceptable by the public and workable in operation.

In this paper, the whole problem of a price policy will be approached for all agricultural commodities by centering attention first on feed grains. Some of the main reasons for this are: (1)

Livestock, particularly hogs, poultry, and dairy cattle, and livestock products, constitute by far the largest demand for crop land and other farm resources in the United States. Stabilizing feed grains would directly stabilize the supply and kinds of livestock and indirectly assist in reducing fluctuations in supply and prices of all major farm products. (2) Factual background for sound reasoning has been made available for corn and hogs, the main grain crop and the main meat supply, relative to supply and demand controls. See U. S. D. A. Technical Bulletin No. 826, "*Controlling Corn and Hog Supplies and Prices*" and references given therein. (3) If a stabilization policy for feed grain crops and as a result a more stabilized price for livestock can be made workable and acceptable to the farmers and general public, wheat and rye can be fitted into this program also, since the marginal use, after exports, of these bread grains is livestock feed. (4) A program can be made effective early for stabilizing production and prices for all grain crops (indirectly for grain-fed livestock, poultry and dairy products). At about the same time a program can be made effective for adjusting cotton and tobacco production to demand while perishables and beef cattle (where demand is elastic) could await insistent demands for assistance upon the part of growers of those commodities and also await a few years of experience in forward pricing on perishables with inelastic demand curves.<sup>1</sup>

#### *Stabilizing Supplies of Grains and Livestock*

By using the factual material and carefully arrived conclusions and references in Geoffrey Shepherd's U. S. D. A. Technical Bulletin No. 826, "*Controlling Corn and Hog Supplies and Prices*," as a foundation, a related but new plan will here be presented for the first decade following the close of the war. Shepherd's plan which provides scientifically determined loan levels for forward pricing operations, which in practice means "*producing farm products on contract*," would gradually become a more important part of agricultural price policy during the decade. Immediately, the following plan would suffice.

In brief, the overall plan here given would be to determine what a "normal" or some appropriate average supply of feed grains would be for each year for the next few years, modifying each yearly figure to allow for longtime trends in acreages and yields (i.e. total pro-

<sup>1</sup> Irish potatoes could be put under forward pricing immediately.



duction). The feed grains to be included in order of volume are corn, oats, barley, and grain sorghums. Quoting Bulletin No. 826 on page 82, "Stabilizing supplies of corn would take out most of the fluctuations in total production of feed grains, but before total supplies of feed can be completely stabilized, it will be necessary to set up stabilization for the other feed crops too." This stabilization would be accomplished by having the Government purchase or acquire on surplus feed crop years or through especially adapted non-recourse commodity loans all grain above the designated normal supplies for that year, and to automatically release enough of these stocks in short crop years to make normal supplies available to feeders.<sup>2</sup> There would be no restrictions on acreages or production. There would be exceptions to this procedure, specifically designated in the Act. For example, in time of war, in periods of unemployment and depression and in business boom periods, modifying actions would be taken. By stabilizing supplies of feed grains offered for use each year, much of the basic causal factors for hog and poultry cycles would be removed. Bulletin No. 826 says, "The problem of controlling supply (hogs) is largely a problem of controlling the supply of the raw material." The manner in which wheat and rye will be fitted into this stabilization picture will be treated briefly, as will perishables, cotton, tobacco, rice, special and miscellaneous crops.

The method used in securing control of surplus feed crops and of disposing of the same in this plan varies markedly from that suggested by Shepherd. He proposed to arrive scientifically at loan values and use them in a forward pricing manner, such loan values having been designed to call forth a predetermined amount of grain needed to supply demand. In the plan presented in this paper, the government, when a surplus appeared (above normal requirements) in total production of all feed grains would purchase them at prevailing market prices and also make some non-recourse loans<sup>3</sup> at such levels as to secure control of all the surplus above normal.<sup>4</sup> Similarly on deficit years, sales (or redemption of loans by farmers)

<sup>2</sup> Releases of feed grains could be on an area basis in such a way that releases would be made in a deficit area even while counter-acting amounts were being purchased in surplus areas.

<sup>3</sup> These non-recourse loans would be made to allow farmers to redeem them only when a deficit feed situation occurred in the area where the grain was located.

<sup>4</sup> If this program is to be largely self-supporting, a small percent less than the surplus above normal would be acquired by the Government in surplus years and less than enough released to make normal supplies in deficit years.

at or near *prevailing market prices* would be made by the Government automatically and of an amount sufficient to bring grain supplies to normal levels.

*Loans and purchase contracts could be offered farmers in such a form (covering five or more years of crop fluctuations) that subsequent legislation based on pressure group tactics to prevent release of supplies could not interfere with or abrogate these contracts with individual farmers to release such grain until the contracts (which would bind the Government to a certain program of stabilization) expired and different contracts were provided for by law.* The courts would enforce these contracts against abrogation by the Government.

During the time of a depression and of considerable unemployment the operations of grain stabilization activities under these contracts would proceed normally to insure normal amounts of available feed grains and of livestock and livestock products for consumption. Since market prices would surely decline<sup>5</sup> for grain and livestock under these conditions, the price of livestock would be maintained by paying livestock raisers a certain amount above market prices per unit as a bonus or subsidy to maintain returns at what the Federal Land Bank has in recent years called "normal values" i.e. a reasonable average price for normal peacetime conditions.<sup>6</sup> This would tend automatically to keep prices of grains near normal also.

During a war or in periods of emergency and of excessive amounts of purchasing power in the hands of consumers and the Government, the contracts would provide a different approach by permitting greater than normal consumption of livestock and livestock products during that time. When these conditions could be foreseen, outlook information and goals could be used to increase grain production and to step up all agricultural production as was done in World War II. Non-recourse loans at attractive levels might be resorted to. For periods of short non-emergency increases in purchasing power (booms) in the hands of consumers, mild increases in grain crops could be called for a year ahead and increases in the "normal stabilized" amount of feeds available to livestock feeders could be increased on a predetermined ratio with estimated

<sup>5</sup> U.S.D.A. Technical Bulletin 826, p. 11—"A change of 10 billions in total non-agricultural income causes a corresponding change of \$1.20 in hog prices.

<sup>6</sup> Normal values might be tied to prices prevailing during recent periods of normal employment or a normal non-agricultural income situation.

increases in total non-agricultural income or increases in total employment.<sup>7</sup>

Livestock prices should be uncontrolled during normal times and during short non-emergency periods of increased purchasing power of consumers. During war and emergency periods, rationing with ceiling prices and floor price guarantees would be invoked to get maximum productions and socially desirable distribution.

In summary, the general plan here suggested is to stabilize grain supplies (without acreage controls) available to feeders each year with certain exceptions for emergencies and to let free open market operations determine prices of grain, livestock, and livestock products. "Forward pricing" as suggested by Shepherd and Schultz of Iowa could await reasonable achievement in stabilizing grain and livestock production. Stabilization would, no doubt, cut costs of production and marketing considerably and consumers under this plan could eventually get much of the savings through a general lowering of food prices. But as Shepherd says, "Most farmers would produce more hogs in response to a guarantee of \$9.00 than for a forecast of \$10.00." This would be true in principle of most, if not all agricultural products and the next step "forward pricing" through non-recourse loans would result in still further savings in cost, and still higher levels of living for consumers and farmers.

#### *Protection Against Inventory Losses*

From Shepherd's discussions, it is learned that maximum reserve stocks of 700 to 800 million bushels of corn would stabilize annual supplies of corn, except perhaps during one year in 71. Since corn is about 75 percent of the total supplies of feed grains, one-third more or a little over one billion bushels in corn equivalents<sup>8</sup> would be sufficient to reasonably stabilize all feed grains. To protect inventory losses and shortages of storage space all amounts added to the reserve of over 800,000,000 bushels in corn equivalents would be 95 percent of the first 100,000,000 bushels, 85 percent of the second and 70 of the third and so on progressively.

For drought years such as 1934 and 1936 when total production was less than 70 percent of the normal stabilized supply not all of the deficit could be replaced from the reserve stocks. Thus there

<sup>7</sup> See p. 11—U.S.D.A. Technical Bulletin, No. 826.

<sup>8</sup> Measured on the basis of amounts of total digestible nutrients per bushel as compared to corn.

would be some lack of complete stabilization at both extremes. Grains should be imported during extremely short years. Some form of quota system would be necessary (no tariffs) to maintain stabilization. Moreover, as prices of feed grains rose from shortages below "normal stabilized" supplies, wheat might become available for feed in increased amounts.

#### *Wheat and Rye Stabilization*

Wheat<sup>9</sup> differs from feed grains in that significant amounts of some varieties will be exported into the world markets if tariff barriers are reduced and wheat prices are allowed freely to follow world market quotations. This encouragement to exports is recommended as an important part of a price policy for wheat. Under only two conditions would competitive wheat prices be modified or supported. During wartime or other emergencies when more wheat was needed than would be produced under free and open prices, price supports, by non-recourse loans and ceiling prices would be invoked by the Government. In times of large U. S. or World crops or both, wheat prices in the Pacific Northwest and in the Winter Wheat area of the Southwest might fall to feed grain prices or below.<sup>10</sup> At such a time the feed grain stabilization corporation would go into the domestic market and buy all wheat that could be purchased at the prevailing price of corn in the central cornbelt on a T. D. N. equivalent basis.<sup>11</sup> This surplus wheat would become a part of the feed grain reserves and would be sold out for feed (not for flour) at feed prices during a feed grain deficit year, and sold preferably in or near the areas where this wheat originated when there is a feed grain deficit in or near these areas.<sup>12</sup> For more details, see separate submission on wheat.

#### *Price Policy for Cotton, Rice and Tobacco*

These crops will have to be adjusted in acreage and production to domestic needs plus what can be exported. Until such time as agriculture in cotton, rice, and tobacco areas can be adjusted to

<sup>9</sup> The word wheat will be used to denote both wheat and rye.

<sup>10</sup> Feed grain prices would be stabilized to a considerable extent by this program and at fairly uniform prices from year to year.

<sup>11</sup> Prices of wheat in wheat areas have infrequently fallen as low as values of feed grains in major grain producing areas, but with feed grain being stabilized this could happen in the Pacific Northwest and in the Southwestern Winter Wheat area.

<sup>12</sup> Even though for the country as a whole there was a surplus of feed grains and purchases were being made elsewhere during the same year.

this situation a program of declining price supports (in the form of cash payments to growers) to give a progressively smaller percentage of parity prices should be instituted. Some world stabilization agreements might be feasible for cotton and rice although for tobacco it would be questionable.

#### *Price Policy for Dairy Products, Beef Cattle and Sheep*

Dairy prices in general should remain on an open competitive market basis except for whole milk where marketing agreements have functioned well. No control program would be needed except in war periods and depressions. In depressions price supports in form of subsidies to producers would be workable, in maintaining a steady flow of dairy products to consumers.

Beef cattle and sheep should be handled as in prewar days with however more intensive outlook service for producers. Better stabilization of hogs and poultry production and grain feeding under the proposed feed grain program would have beneficial effects in stabilizing demands for feeders, beef and mutton. Little can be done to stabilize range carrying capacity within a decade but numbers allowed on the range can be. However, more uniform marketings can be encouraged and made possible by a system of subsidizing hay reserves held by individual ranchers. This is recommended in semi-arid regions. For war periods and depressions beef cattle and sheep would get the assistance as herein before outlined in the form of price supports. During wartime, ceiling prices on hay might need to be used as at present. Price supports for hay eating animals during a depression would tend to hold hay prices at normal levels.

#### *Price Policy for Perishables*

An experimental program of price supports acting as a "forward pricing" device could be instituted for Irish potatoes. Loans should be kept low and apply to standard grades only and correspond to average *variable* (not overhead) production costs<sup>13</sup> of the previous year as they differ in the main commercial potato growing areas. On surplus crop years some potatoes would be acquired by the government. These should be sold to by-product industries or for livestock feed and the government should absorb the loss. Competition within the industry would soon provide more stable acreages

<sup>13</sup> As determined by a sampling survey conducted yearly by the B.A.E.

and larger average crops because of the elimination of a large part of the price risk. This would mean lower average prices to consumers. Research for a better use of surpluses should be continued.

Whenever a clear case of public benefit could be demonstrated, as in the case of Irish potatoes, other perishables would come under a stabilizing program similar to that for this crop or modified to suit peculiarities of that crop and of markets and demand. In general, however, the initiative and burden of proof should be on a majority of the growers. Proceedings similar to organization for market agreements would be desirable.

#### *Price Policy for Oil Crops*

A free open market on a world wide basis would seem desirable here, whenever world peace seems reasonably assured for a decade or more.

#### *Stabilizing Demand*

Programs should be instituted to permit all consumers to purchase requirements for a full balanced nutritive diet each year regardless of business conditions. Unemployment, sickness, and old age insurance,<sup>14</sup> subsidized food tickets, school and in-shop lunches and other means of a similar nature need to be expanded. Education can be used to encourage the use of better quality and balance in foods consumed, and to exalt food into a higher bracket in consumer's arrays of values i.e. budgets.

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<sup>14</sup> *Land Policy Review*, Spring and Summer, 1945—Volumes VII and VIII.



*An Honorable Mention Paper*

**A PRICE POLICY FOR AGRICULTURE, CONSISTENT  
WITH ECONOMIC PROGRESS, THAT WILL  
PROMOTE ADEQUATE AND MORE  
STABLE INCOME FROM FARMING**

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**S**UGGESTIONS for modernizing parity prices and establishing support price levels.

In making the following suggestions with respect to modernizing parity prices and establishing support price levels for agricultural commodities, it is assumed that the objectives of our postwar agricultural price policy will be:

- A. To promote the efficient use of our agricultural resources in producing a balanced abundance of agricultural commodities, and
- B. Assure a level of farm income which will permit an improving standard of living on farms and provide an expanding market for the goods and services of the non-farm population.

It is further assumed that the postwar agricultural program will be a part, but only a part, of a national program designed to stimulate employment, increase production of goods and services, promote international trade, and raise living standards. It is assumed also that every effort will be made to improve opportunities for individual economic freedom and to minimize governmental regimentation consistent with the attainment of the over-all objectives.

Attainment of the over-all economic objectives in this manner requires recognition of the role of government in the agricultural price field as being in the nature of an insurance agent—protecting farmers against disastrously low prices, but not guaranteeing a high price to every farmer in every market every day. It also means that government may find it necessary, through encouraging cooperatives, or otherwise, to supplement existing marketing agencies and facilities in order to implement its price commitments. A further pre-requisite is that considerable authority be delegated to administrative agencies and their advisory committees to make adjustments to meet changing conditions. On the other hand, the legislation delegating authority to administrative agencies should contain

reasonably definite standards and formulae for the guidance of administrative agencies.

Since 1944, parity prices as computed and published by the Bureau of Agricultural Economics have been used as the primary legislative guide or standard for governmental price action with respect to agricultural commodities.

For a period of two years beginning the January 1 immediately following the date upon which the President by proclamation, or the Congress by concurrent Resolution, declares that hostilities in the present war have terminated, the Government is committed to support all so-called basic and Steagall commodities at 90 percent of parity. For the period following the termination of this commitment, however, it is appropriate to examine the nature of this standard.

### *I. How Parity Prices are Computed<sup>1</sup>*

The present parity price formula defines a relationship, or exchange ratio, between average prices paid by farmers and average prices received by farmers. It is not primarily a cost-of-production or standard-of-living formula. Not all cost-of-production elements are reflected in the formula and a single index of prices paid by farmers is used for all commodities, irrespective of the varying rates of change in cost of production for the individual agricultural commodities.

The steps or methods used in calculating parity prices for agricultural commodities are:

- (1) A base period price is determined for each commodity. Where satisfactory data are available this is done by computing a single average of the average prices received by farmers for the 60 months beginning August 1909 and ending July 1914. The average price thus computed, for example, for cotton was 12.4 cents per pound, corn 64.2 cents per bushel, and wheat 88.4 cents per bushel. Where satisfactory data are not available for pre-war periods more recent base periods are used. For a number of fruits and vegetables, the base period is August 1919 to July 1929, and in the case of burley and flue-cured tobacco is the 60 months from August 1934 to July 1939.

<sup>1</sup> For a more complete discussion of this subject see Wells, O. V., *Parity Prices, What They are and How They are Computed*, mimeo, Bureau of Agricultural Economics, June 30, 1942.

- (2) An index of prices paid, including taxes on real estate and interest paid is calculated. This index is computed and published as of the 15th of each month. As of June 15, 1945, the index was 173—using the 1910 to 1914 period as 100 percent. This means that prices paid by farmers, including interest and taxes as of June 15, 1945, were at a level 73 percent above the level which prevailed in the 1910-14 period.
- (3) The third step is to multiply the base period price for each individual agricultural commodity by the index of prices paid, interest, and taxes. For example, the June 15, 1945, parity price for cotton was computed by multiplying 12.4 (the base period price) by 1.73 (the current index of prices paid), the result being 21.45 cents per pound. The parity price of corn similarly computed (\$0.642 per bushel times 1.73) is \$1.11 per bushel as of June 15, 1945, and the parity price of wheat (\$.884 per bushel times 1.73) is \$1.53 per bushel.

## II. *Inadequacies of Parity Prices as Now Computed as a Guide to Production and Market Prices*

Differential changes in production costs of agricultural commodities are not reflected in parity prices as now computed. As indicated above, the parity price for each commodity is determined by multiplying a base price for that commodity by a single index of prices paid, including interest and taxes, but not including farm labor. Thus, parity prices for all commodities go up and down with the general level of prices, irrespective of the trend of production costs for individual farm commodities. This tends to result in relatively favorable parity prices for commodities, the production of which over the past 30 years has been highly mechanized with important savings in labor costs. It tends to result in relatively unfavorable parity prices for those crops and livestock products which still have a high labor requirement or for which relatively few improvements have been made in production techniques.

The present parity price formula, likewise, does not reflect differential changes in the demand for individual farm products. For example, in the 1910-14 period large quantities of oats were needed in cities as a horse and mule feed and oats commanded a premium over other feed grains of comparable nutrient value. With the decline from approximately 17,000,000 head of horses and mules off

of farms to less than 2,000,000 the special feeding demand for oats has tended to disappear but this change in demand has not been reflected in the parity price for oats, and in the 1935-39 period prices received by farmers for oats averaged only 67 percent of parity, whereas, corn prices averaged 84 percent of parity. The decline in the use of horses and mules both on and off farms is likewise reflected in the relationship of actual prices to parity prices for these animals. During the 1935-39 period the farm price of horses averaged 51 percent of parity and the farm price of mules averaged 54 percent of parity. In contrast the price of beef cattle averaged 95 percent of parity, reflecting the relatively strong continuing demand for beef. Cottonseed represents a commodity, the products of which have found ever-widening market outlets with the result that prices to farmers for cottonseed during the 1935-39 period average 95 percent of parity. It seems quite evident that as of the most recent pre-war period long-time trends in demand had resulted in a situation where parity prices based on pre-World War I price relationships were relatively too high for horses and oats on the one hand and relatively too low for beef cattle and cottonseed on the other. There are numerous other examples that might be cited to illustrate the inadequacies of parity prices as presently computed as guides for production and day-to-day market prices for individual farm commodities as a result of differing trends over the years in production costs of, and demand for, individual agricultural commodities.

As illustrated above, one measure of the relative favorableness of parity prices is the extent to which market prices for a recent period of years have varied from parity prices. Out of 60 commodities, farm prices averaged less than 50 percent of parity during the 1935-39 period for 1 commodity, between 50 and 60 percent for 4 commodities, between 60 and 70 percent for 6 commodities, between 70 and 80 percent for 16 commodities, between 80 and 90 percent for 12 commodities, between 90 and 100 percent for 8 commodities, and over 100 percent for 13 commodities.

It should be remembered that parity prices are based on average prices covering all qualities of a commodity being sold, all locations at which they are sold, and all periods of the year during which they are sold, except in a few isolated instances where some adjustments are made for seasonal variations. In using parity prices as a guide to market prices, therefore, it is important that adequate pro-

vision be made for adjustments to reflect differences in quality, differences in location, and differences in time of marketing. Also provision should be made for adjusting prices to take into account carry-over stocks.

Since only one figure is published as of any given time to represent the parity price for a commodity, there is a tendency to regard only one price as representing true parity, leaving out of consideration quality, location, time of marketing, and other factors which determine the value of commodities. The base period prices on which all parity prices are computed do not represent a constant price over the base period. During the base period, there were wide variations in prices and thousands of individual prices were taken into consideration in computing the averages which form the basis for parity prices. In the case of cotton, for example, the average price received by farmers as of the 15th of each month varied from 8.6 cents per pound on December 15, 1911, to 14.5 cents per pound on June 15, 1910, as compared with the average of 12.4 cents per pound for the entire period. Likewise, the average price for the entire period varied by States from a low of 11.4 cents per pound in Oklahoma to a high of 17 cents per pound in Florida (reflecting the higher value of Sea Island Cotton in Florida). In addition there were, of course, variations in the price of cotton as of any given time depending on the quality of cotton being marketed. Likewise, in the case of wheat the average monthly United States prices during the base period varied from a low of 76.1 cents per bushel to a high of \$1.14 per bushel as compared with the average for the period of 88.4 cents per bushel. Average prices for the entire base period varied by States from a low of 76 cents per bushel in Montana to a high of \$1.29 in South Carolina.

### *III. Suggestions for Improvements in the Parity Price Formula*

In order to accomplish the objectives outlined at the beginning of this paper and to minimize the amount of discretion which would otherwise be necessary to leave to administrative agencies, it is suggested that the parity price formula itself be revised so as to:

- A. Make the formula a more accurate index of production costs by including the cost of hired labor in the parity index, and
- B. Provide for continuous modernization of parity prices by a periodic revision of the base prices of individual commodities, taking into consideration the relationship of the average

prices of individual commodities to all agricultural commodities during a period of 5 or more years during the preceding 10 years, with a proviso that the average of all parities weighted by the gross farm value of the individual commodities during the preceding 5 years shall not be increased or decreased by more than 2 percent as a result of such adjustments of individual base prices. Under such a formula, the general level of all parity prices would be maintained at approximately the same level as if each parity price were based on the pre-World War I period. Making continuous adjustments in the base prices for individual commodities, so as to reflect relationships during the preceding 10 years would, however, reflect in the parity prices trends in the production costs and relative demands for the individual commodities. Provision for the elimination of not more than 5 years of the 10 preceding years in the computation of the adjusted base for any commodities would permit the omission of years when price relationships were abnormal because of floods, droughts, or other unusual conditions.

#### *IV. Suggestions for Implementing Price Policy Objectives*

It is suggested that administrative agencies be directed to carry out price-supporting operations within the following frame-work:

- A. Direct that price-supporting operations shall be carried out at such levels as are calculated to maintain the ratio of the per capita income of persons on farms to the per capita income of the non-farm population at not less than 100 percent of the 1910-14 ratio and to maintain an overall price ratio for all agricultural commodities (prices paid, interest, taxes, and wages of hired labor to prices received by farmers) of not less than 90 percent or more than 110 percent of parity (1910-14 = 100 percent).
- B. Authorize the carrying out of price-supporting operations including loans, purchases, and diversion payments, with respect to individual farm commodities, or groups of farm commodities at not less than 75 percent, or more than 125 percent of the adjusted parity prices for such individual commodity, or group of commodities, with appropriate quality, location, and seasonal differentials. In establishing the support levels for individual commodities, consideration should be given to:



1. The attainment of the over-all production, income, and parity price objectives specified above.
  2. The extent to which stocks of individual commodities have accumulated or are likely to accumulate.
  3. The relationship of the support price for one commodity, or group of commodities, to the attainment of production and price objectives with respect to a closely related commodity or group of commodities. For example, in establishing the levels for support price for feed grains, it would be necessary to take into consideration the level of support prices and production objectives with respect to livestock products.
- C. It is believed that with (1) the adjustments in parity prices and the flexibility in establishing individual commodity support prices suggested above; (2) continuation of the authority which now exists for using the funds of Commodity Credit Corporation, and funds appropriated under Section 32 of Public Law No. 320, Seventy-fourth Congress (30 percent of Customs Receipts) in making loans, purchases, payments, and export sales, in developing new uses, and in distributing commodities for relief; and (3) an aggressive, well financed, soil conservation program, the foregoing price and income objectives can be achieved with a minimum of governmental regimentation and individual commodity production restrictions.

*An Honorable Mention Paper*

**A PRICE POLICY FOR AGRICULTURE, CONSISTENT  
WITH ECONOMIC PROGRESS, THAT WILL  
PROMOTE ADEQUATE AND MORE  
STABLE INCOME FROM FARMING**

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**A**GRICULTURAL price policy is today as prominently before the American people as it was a generation ago. There is good reason for this interest when one notes the similarity of changes in farm prices during the two wars and the tremendous expansion—nearly one-third<sup>1</sup>—in the total volume of agricultural production during World War II.

No satisfactory long-term price and income policy has evolved for agriculture, although several programs have been tried during the past two decades.

*Desirable Objectives*

As long as the war continues our farm price policy should, of course, be geared to the war effort. Likewise, all prices should be subject to regulation as long as there is a general scarcity of goods and a serious threat of inflation.

The transition from a war to a peacetime economy should be handled with foresight and care. Agriculture ordinarily adjusts slowly and it is therefore desirable that heavy government purchases of food and price supporting measures be not suddenly discontinued, but rather that they be scaled down gradually and dovetailed into a long-term agricultural program. It is to the long-term policy which this paper is primarily directed.

There are two major objectives for a long-time agricultural price policy to which most people will subscribe:

1. It should make certain a reasonable and fairly stable farm income.
2. It should be in harmony with national interest and general public welfare. This objective includes efficient and well balanced production of the kind and quality of foods and fibers for which there is an active demand.

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<sup>1</sup> Production in 1943 and 1944 over the 1935-39 average.

People will differ as to how these objectives can be attained, but they are not likely to disagree seriously on the desirability of attaining them.

The officers of the American Farm Economic Association have added the following three requirements as essential for any proposal which is to serve as a practical basis for farm price and income policy:

1. It should be easy to understand and simple to administer.
2. It should be sufficiently flexible to reflect changes in cost and demand conditions for any farm commodity.
3. It should be so designed that it will be possible for consumers, as well as producers, to share in the benefits of increased production.

It is assumed that the third point refers not only to increased production of farm products but also to industrial products and services for it is important that farmers share in improvements in other lines as well as for them to share their own advances with others. Certainly the objective should be to have all parts of our economy share in every major improvement relating to costs, products or services whether on or off the farm.

#### *Present Policy Only Partially Effective*

Two standards have generally been used in testing the effect of price programs on agricultural income. One is the ratio of per capita net farm income of all people living on farms to the average income of all nonfarm people. The other is the ratio of per capita income of agricultural workers (operators and farm help) with that of industrial workers. These ratios are ordinarily considered to have been in balance or at parity during the five-year period 1910-14.

By either standard a stable farm income is a relative matter. By either standard farm income between the two World Wars should have been substantially higher than it was. These standards also show that the various farm programs, while undoubtedly helpful, did not bring parity income to agriculture consistently over a period of years.

The ratio of per capita net farm income of people living on farms to the income of all nonfarm people is obviously the more conservative standard of the two. Not only was this ratio considered in balance in 1910-14, but it was nearly in balance in 1925-29 and again

in 1935-38 even though the unemployment roll was between 8 and 10 million persons in the latter period. The nearness of this standard to being in balance in the late 1920's and again during part of the 1930's should largely do away with any criticism of the 30 year historical base. In fact, it is probable that this standard would not be wholly acceptable to agriculture since farm leaders have usually made comparisons between farm income and that of industrial labor.

On a per capita basis nonfarm people receive \$3.16 for each \$1.00 to farm people under the first standard. Under the second standard the industrial laborer received \$1.59 for each \$1.00 to the farm worker. These dollar relationships indicate that any error in equity in applying the first standard to rising prices and incomes is probably against rather than in favor of the farm people. A ratio is usually better for measuring relationships around a particular price level than it is in going from one level to another.

Programs developed under the parity price concept have been applied on an individual commodity basis and sometimes on a market basis as in the use of Federal orders in fluid milk markets. Prices and price ratios have not remained static but have fanned out over a wide range making difficult individual market and product control. Prices of 160 farm products varied from less than 50% of parity to over 140% of parity for the period 1935-39. Within each type of product such as grains and hay, vegetables, fruits and animal products, there were wide differences in percentage of parity. Prices for the same 160 products in 1943 varied even more and ranged from under 50% to well over 300% of parity.

As a result of the parity price and commodity approach, cotton prices were supported at a level which prohibited normal exports and which maintained production above domestic demand at the very time there was a burdensome supply on hand and when land and labor were needed for food production to support the war effort. Likewise, this policy tended to confine the production of certain crops such as tobacco and cotton to particular areas and in some cases high cost areas.

No provision has been made for changes in farm and nonfarm populations or changes in methods and volume of farm and industrial production. The farm population dropped from 32 million in 1910 to 25.5 million persons in 1944, while the nonfarm population rose from 59 million to nearly 112 million. Farm production has

been generally upward from an index of 79 in 1910 to a peak of 136 in 1944.<sup>2</sup> Industrial production figured on the same basis varied from an index 58 in both 1921 and 1932 to 235 in 1944.

*Recommend Policy with Parity Income Guarantee*

The most desirable price policy for agriculture and for our economy as a whole would be to have all prices established by normal operations of supply and demand provided that there is substantially full employment and provided our economy is in balance. The difficulty with this concept is that the premise upon which it rests does not conform to the conditions that are likely to prevail for a considerable time after the war. It is not certain there will be full employment or that the economy will be in balance. War is a powerful unbalancing force. Technological developments are many and revolutionary; social and economic forces have never been more dynamic. Agriculture cannot adjust quickly and farm income suffers disproportionately during periods of adversity.

Before continuing in the direction of more and more governmental control in agriculture it would seem advisable to try to devise some other way of keeping agricultural income in balance with the rest of the economy through measures that will lead to less rather than more regulation.

If agriculture is to prosper it must work for both a large national income and for a fair share of that income. It is not enough to obtain a fair sized piece of the income pie. It is also necessary to have a larger pie. This suggests agricultural policy should deal with price making forces and with the resulting income and not merely with prices. Some of the more important considerations are as follows:

1. It should include a national policy to promote a sound over-all economy in which a high level of production and employment is encouraged. Successful efforts along this line will not only help create maximum markets and fair prices for farm products, but also economic opportunities for surplus farm people.
2. Every effort should be made, through education, research and organization, to increase efficiency in farm production and marketing. No one can expect to make prosperous an inefficient agriculture or inefficient operators within agriculture.

<sup>2</sup> Average production for 1935-39 equals 100.

3. Since adequate diets effect profoundly the health of our people and also the market for farm products a sound national nutrition program should be developed both as an aid to consumers and to farmers. It should be geared primarily to consumer needs and agricultural benefits should be secondary.
4. Export markets for farm products should be developed as extensively as possible consistent with our general foreign policy and sound national fiscal policy.
5. *Agriculture as a whole should be guaranteed a minimum share of the national income as a floor below which total farm income will not be permitted to fall. If total net farm income from normal operations is below the prescribed minimum then it should be supplemented with parity income payments direct to individual farmers in proportion to the market value of the products which they produce and sell.*

The first four measures are generally understood and fairly widely accepted. It is hoped, of course, that action of this type will be so successful that no other will be necessary. The real problem is what to do when these measures fail to bring satisfactory farm income. The fifth proposal is designed to meet this need. It operates in terms of parity income rather than in terms of parity prices, and in terms of agriculture as a whole rather than in terms of individual commodities.

#### *How the Guarantee Would Work*

In developing a program for guaranteeing to agriculture a minimum share of the national income, the problem is divided for analytical purposes into three parts:

1. What minimum share of the national income should go to agriculture?
2. How should the money be raised?
3. On what basis should it be distributed?

*Minimum Share:* Two bases were used earlier in testing the effectiveness of our agricultural price programs. These methods can also be used in determining the proportion of the national income which should go to agriculture. They are:

1. Per capita net income of persons on farms with persons not on farms in the ratio which existed during some base period when there was reasonably full employment and after people have



had reasonable opportunity to choose their work and locations. The 1910-14 period is believed to be fairly satisfactory for this purpose. The farm and nonfarm incomes were also nearly in balance on this basis in 1925-29 and again in 1935-38, not counting government payments to agriculture.

2. Per capita net income of farm workers (operators, hired help and family labor outside the house) compared with industrial labor. This ratio while undoubtedly more acceptable to agriculture is probably less justifiable in a national program involving not only farm people and industrial labor but all others as well.

Either ratio would adjust automatically agricultural income to the number of people on farms. If the second ratio were used it would probably be necessary to take 1925-29 or 1935-39 as a base period in which case much of the difference in recent years between the two ratios would be eliminated.

*Source of Funds:* Most agricultural leaders would like to avoid government payments and have all their income obtained from the sale of their products and through the usual marketing channels. This is but another way of saying that consumers should pay a price sufficient to bring to people in agriculture a fair and reasonable income. Such a program leads to production control for there is no way of guaranteeing that consumers will pay such prices for all that is likely to be produced after the war. It also means that when prices are raised artificially the burden falls heavily upon those least able to pay.

Since the problem is essentially one of distributing fairly the national income it seems logical to take the funds from public sources and raise them through taxation. This will not disturb the movement of goods through normal trade channels including exports and will not pile up burdensome supplies. In the long run it will likely be less costly than indirect measures.

*Parity Income Payments to Farmers:* It has already been suggested that when parity income payments are necessary they be made directly to individual farmers in proportion to the value of the products which they produce and market. This is believed to be a reasonably good measurement of their contribution to society. Payments will be made on the basis of production and sales rather than on the basis of restrictions or curtailments of production.

It is suggested that two limitations be placed upon parity income payments:

1. That a limit be placed upon the percentage of the total of such payments which can go to any individual, firm, corporation or association.
2. That cash payments be made only to those following satisfactory soil conservation practices and that payments due others be allowed only for conservation measures on such farms. It would seem that payments from public funds could well be conditioned upon serving the public and the farmer's own interest through soil and fertility conservation.

It is frankly recognized that cash marketings may not in all instances be comparable and therefore may need some adjusting. For example, if producers retail their own milk a division must be made between the farm value of the milk and payments for marketing services. Likewise, where fruit is purchased on the trees allowance may need to be made for the picking service to put it on a comparable basis with other products. Consideration must also be given to eliminate duplication or pyramiding of payments particularly in feed crops and livestock which are sold from one farmer to another. It is believed that difficulties of this kind are not insurmountable and are much less than in the separate treatment of prices for individual commodities.

#### *Application of Plan*

The data necessary for determining the total amount of parity income payments are now collected annually by the United States Department of Agriculture. It is probable that these figures need to be refined. Any error in the national data will affect the total amount to be paid out and not the relative amounts to individual farmers. Each farmer will need to furnish his own evidence of products produced and marketed.

The total annual parity payments under this plan would have varied from nothing in 1925, 1937 and 1941-44 to 3.5 billion dollars in 1921. In 1931 and 1932 the parity income deficits were about 2.2 and 2.1 billion dollars respectively. They averaged 1.1 billion dollars during the twenty-year period 1921-40. These figures are large, but they are also indicative of the hardships which agriculture suffered due to maladjustments in incomes. The govern-

ment payments that were made were not well adjusted to annual parity requirements.

Parity payments in percentage of cash marketings would have varied from nothing in those years in which there were no deficits to as much as 43% in both 1921 and 1932. For the periods 1925-29 and 1935-38 these payments would have averaged about 4.5%. They would have been largest in the years when the need was greatest.

The program outlined here can go a long way in attaining the objectives listed earlier. It permits full production and freedom of action on the part of the individual farmer. It gives agriculture a direct interest in promoting the national economy since the industry is assured a minimum share of the national income. Unless the minimum parity income is placed at too high a level there need be little fear of people staying in too large numbers on farms or of a land boom. People have moved off of farms in largest numbers when farm incomes were relatively high due to the fact that city employment opportunities were largest during these periods. Farm land prices have risen during periods when farm incomes were above parity or when price levels were rising.

Some people will not like the possible drain upon the federal treasury from this program during periods of low farm income. On the other hand, it is probably as equitable a way as any of balancing incomes without restricting production. The parity income payments are simple and flexible. Considering that they extend to all of agriculture with its 5.5 million units it is believed the administration will not be unduly involved. Finally it should be emphasized that this program is designed to assure agriculture a fair share of the national income in proportion to its contribution and to the contribution of individual farmers. It is not a cost of production or relief program.

*An Honorable Mention Paper*

**A PRICE POLICY FOR AGRICULTURE, CONSISTENT  
WITH ECONOMIC PROGRESS, THAT WILL  
PROMOTE ADEQUATE AND MORE  
STABLE INCOME FROM FARMING**

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*A. Prices and Production*

**T**HE foremost problem confronting agriculture after the post-war conversion period is to find markets for the greatly expanded farm production. Other problems are ancillary to this. The emphasis will shift from production to marketing and distribution of commodities. A favorable solution to this problem depends not only on high levels of employment, productivity, and national income, but also upon a redistribution of agricultural resources induced by the price system. An adequate agricultural price policy must provide for a sound integrated program of both production and consumption.

Despite a drop of over 5,000,000, or nearly 17% since 1940 in the number of persons living on farms, farm production has increased 35%. Output per farm worker has advanced 20% above pre-war levels. Part of this rise is due to an increase in average hours worked; but the long-term rise in output is largely attributable to mechanization and application of the enormous progress in scientific production.

Encouraged during 1944 by the largest cash farm income in history, estimated at \$19.8 billions (excluding government payments of \$800,000,000), farmers will strive to maintain their phenomenal gains. During the post-conversion years there will be adequate farm labor and a substantial potential consumer purchasing power. But a declining demand coupled with four years of unprecedented production and a considerable carry-over of certain products into the post-war years will press downward upon farm prices.

Consumer expenditures are not likely to fall as rapidly as national income, but farm prices will tend to drop under conditions of declining employment and industrial earnings.

The competitive nature of agricultural production makes contraction more difficult than for other enterprises. Production by

separate farming units may recede, but once agriculture as a whole is over-expanded, it requires prosperity again to restore an adequate demand for its products. Immediate action is therefore needed to avert an agricultural crisis; the essence of this is a price policy which will avoid deflationary havoc, prevent stagnation, and encourage long-term adjustments.

During the war period, the greatest rise in wholesale markets has been in prices of farm products, which increased 110%. Retail markets have not felt these price rises directly partly because of the subsidy program. The prices of foods will probably not immediately drop except for seasonal declines, since the demand from Europe, our military, and civilian consumption will take all the food we can produce for at least two seasons.

In the long run, our large agricultural production in relation to demand will tend toward lower prices of agricultural commodities, particularly food products. Once European production is resumed and shipping is available, the world price level for agricultural commodities will tend to drop appreciably. Price levels now sustained by governments in some producing countries are likely to induce greater production when wartime difficulties have vanished. If this country is to hold its own in most export markets, it will be necessary to evolve a price policy which will enable American farmers to compete in the world market. Prices become the key to the post-conversion years and to the immediate transition period. Farmers should be protected from the danger of a postwar price deflation as well as inflation and be assured of relative price stability and adequate income.

The price problem focuses upon an integrated production and consumption program to maintain a level of farm production 40% above prewar levels. This requires expanded markets at home and abroad. There are several methods by which this can be achieved. This method is taken as the only one consistent with economic progress, adequate and more stable incomes from farming and the maintenance of a relatively free market economy. The plan recognizes the transition period and long-term adjustments and recommends basic policies needed for a sound agricultural and total economy. Policies specifically chosen to achieve the objectives of a high level of farm income, production, consumption, and employment of resources, each consistent with an economy of abundance are: (1) shifts toward foods most required for better diets; (2)

encouragement of such programs as school lunches, in-plant feeding, and education for improved nutrition; (3) shifts to more farm products having a comparative advantage in foreign trade; (4) initiation of adequate adjustment programs to facilitate shifts in production rather than sustaining particular production on farms no longer suited to produce these commodities; (5) removal of price rigidities and tendencies to stabilize prices upward rather than facilitate adjustments toward more economically suited areas; (6) extension of Federal benefit payments partly to individuals as consumers, thereby encouraging adjustments through consumer demand pressure in the markets.

Based upon these policies the following program should be adopted:

#### *B. Transition Period and Deflationary Dangers*

The transition period from war to peace can create the basis for obtaining high levels of productivity and farm stability in the longer run. Needed shifts should be encouraged during the comparative prosperity of this period. Since Congress has guaranteed price floors at 90% of parity for the basic agricultural products for two full seasons after the end of the war, these prices are not likely to decline as a group for the next few years.

The pattern of post-conversion demand for agricultural products will vary. The demand will increase for those commodities which have been in short supply during the war and which have a high income elasticity of demand; therefore, encourage output of commodities having a high income elasticity of demand, particularly those requiring a large combination of land and labor such as meats, dairy products, and eggs.

While farm prices are relatively high, consistent with shortages and abnormal demand, and farm real estate values 30% over pre-war levels, the impending danger is a deflationary spiral in farm prices and real estate. Between 1919 and 1921 farm prices fell 70 points and by 1932 had declined 110 points. From 1922 to 1936 over 30% of the farms in the U. S. had mortgage foreclosures. It is imperative, therefore, that we have an agricultural price policy well integrated with a production-consumption program to prevent this situation from recurring.

As an initial step parity price policy should be revised.



### C. Parity Price Policy

The basic parity concept should be maintained but a new price policy is needed. *Parity price has come to mean that price which brings forth supplies which will not move through the normal channels of trade.* Technological innovations, changes in cost of production and distribution make the present parity formula inconsistent with a progressive, dynamic farm economy.

The criteria of an adequate parity formula are: (1) it should aid in apportioning national income equitably among agriculture, labor and capital; (2) it should easily be applied and administered; (3) it should reflect production and market conditions; and (4) it should maximize both production and consumption, thereby enabling consumers as well as producers to benefit. Obviously, the old parity formula based primarily upon relationships of 1910-1914 does not meet these standards. Investigation of alternative parity standards using different base periods for different products, trend values and moving averages, as well as relative incomes which would necessitate an estimate of prices to bring forth such income, all have too many shortcomings. The fundamental weakness of the parity formula is its tie to a historical base period, particularly illustrated by the A.A.A. program, which failed miserably to achieve adjustment shifts because of the supplementary "parity payments" pro-rated according to normal yield on average acres of a past production base.

A progressive farm price policy compatible with an expanding economy should: (1) encourage mobility of resources; (2) serve as a tool in dealing with weather and cyclical surpluses; (3) prevent monopoly and stabilize the general level of farm prices. To achieve these goals will necessitate the following action:

1. The two-year commitment of 90% parity prices will offset precipitous price declines. Encourage farmers during this period to shift to commodities more in demand at home and abroad.

2. Provide "adjustment payments" for individual commodities to facilitate shifting. Devise these payments on the basis of *necessary prices* for individual crops. The *necessary price* is defined as that price necessary to induce output of a commodity and return to the producer more than he would ordinarily receive from the next best alternative use of his resources.

Derivation of *necessary prices* should be undertaken on a representative sampling basis using farm budget analyses for different commodities in combination and for competing commodities in various regions and areas of the country. Much is already known about production responses of farmers to price changes in different areas of the country. Wartime production goal programs coupled with parity and subsidy payments provides an important insight into the *necessary prices* needed to induce production shifts. The exact nature of the cost curves over time for various commodities and areas of production will be difficult to determine; thus, continual analysis is needed to ascertain various production responses at different levels of sustained prices. Experience and constant price analysis will provide adequate tools for perfecting a *necessary price*.

The replacement of parity prices by a system of *necessary prices* is far more sound in reflecting equitable prices needed by farmers, and will result in a public price policy for agriculture which will benefit producers and consumers alike.

3. Parity prices should be considered as a yardstick for determining the average level of aggregate farm prices. Shift the general base period from 1910-1914 to a new base, 1925-1929, since returns to farmers, labor, and capital more nearly approximated a balance in this period. The base 1925-1929 permits agriculture to retain its wartime gains and is needed to offset the relative disadvantage under which it operated during the 30's. Rationally, parity standards should be derived in terms of absolute incomes instead of attached to historical periods, but the only practical approach at present is to attach a parity standard to a base period as recent as possible so that parity prices will reflect changes in cost of production and supply and demand relationships between commodities. This will involve continuous cost and demand analysis to place it in relative balance with returns to labor and capital.

4. Supplement annual *Production Outlook Charts* and forecasts by working out *Consumption Outlook Charts* and forecasts. Before planting of basically important crops the B.A.E. should issue estimated equilibrium prices reflecting domestic and export demand for the succeeding year. This should be periodically revised and would provide a guide to farmers in planning output schedules.

5. Set up an annual list of *necessary prices* which the government will guarantee to 90 percent for different commodities. Such prices

will be current, reflect changes in costs, supply and demand conditions, and take into account present changes in labor, technological innovations, and management. They will perform the fundamental purpose of parity prices—to reflect quickly the presence of divergences in agriculture, introduced by changes in systems of farming, machinery, expenses, etc., geographically and by commodities. A set of loans guaranteeing 90 percent of announced *necessary prices* should be handled through the Commodity Credit Corporation.

*Individual farmers want definite price floors, and they would be more favorably disposed toward a price policy guaranteeing them a minimum annual income.* Equilibrium prices, the rational competitive ideal, means lower prices. *Necessary prices* over the long-term should approximate equilibrium prices. This price policy predicated on income would result in farmers utilizing the best combination of resources and individual commodities to maximize their income. Competition would bring shifts, for example, in some areas from cotton to dairying. Hence, more dairying would induce shifts in marginal dairies to the next best alternative.

Necessary prices should indicate price relationships of individual commodities within the over-all parity framework; they should be designed to adjust prices so that farmers are encouraged to utilize the best combinations of resources and commodities to achieve a reasonable level of aggregate parity prices.

Advantages of this price plan would include: (1) continual encouragement of shifts to best alternative employment of resources; (2) absence of production or quota controls; (3) revival of the original idea of the ever-normal granary—not to act as a price peg, but as a price stabilizing measure.

#### D. Prices and Farm Population

Integrated with a price policy using *necessary prices* should be methods of raising real farm incomes. To equalize the gains of labor real farm incomes will need to be maintained at present levels. Large volume outputs at declining costs and rising productivity per farm worker reflected in lower costs should make this possible. The size of the total farm enterprise can be contracted as efficiencies increase. Farm and urban wages would more nearly balance, many farms would either enlarge or become absorbed on larger farms, effecting large-scale economies, and production and consumption more nearly approach equilibrium.

### E. Prices and Surpluses

A stable level of employment requires maintenance of gross national output 40% above the 1939 level. A post-war gross national product at levels currently being hypothesized fore-shadows a domestic demand for food about 20% above pre-war levels and might mean surpluses of food and agricultural commodities ranging from \$2 to \$4 billions under present production levels.

An adequate price policy should prevent chronic surpluses and mitigate ill effects of weather and cyclical surpluses. Measures to help achieve this end are:

#### 1. Expand Home Markets

- a. Prevent monopolistic activities which restrict the size of the market, unduly enhance prices to consumer, or force farm prices below economic levels.
- b. Remove inter-state trade barriers.
- c. Institute a national nutrition program which would benefit all school children regardless of family income and guarantee an adequate diet at minimum cost to low income families.
- d. Educate consumers about the facts of nutrition and foods in order that producers will be encouraged to abandon low-priced surplus type production giving preference to foods needed for better diets.
- e. Encourage consumer cooperative associations to stimulate the development by processors and distributors to pay more for crops according to condition, quality, and nutritive value.
- f. Encourage research for industrial uses of farm products.
- g. Extend grading and inspection program to both farmers and consumers.
- h. Adapt market news to decentralized marketing.

#### 2. Expand Foreign Markets

*Practically without regard to the relationship of income and prices, farmers have literally priced themselves out of potential markets, particularly foreign markets. In years of high farm output and larger exports, 1910-1919, real farm income generally increased. Farm exports accounted for 23% of cash farm marketings. With restricted production from 1934-1940, exports were low and real*

farm incomes declined. Farm exports totaled 10% of cash farm income. More stable and higher farm income necessitates farm exports at relative levels equal to those in 1910-1919 and higher, preferably 15%. To do this we should:

- a. Encourage the shifting toward commodities having a comparative advantage in foreign trade and those most needed at home.
- b. Improve and expand the reciprocal trade agreements.
- c. Initiate the proposed international food and agricultural organization patterned on the principles of the Hot Springs Conference.
- d. Establish a world commodity corporation to offset impending deflationary farm prices, with objectives to mitigate the disrupting effects of excessive price fluctuations through operation of buffer stock piles to promote an expansionist policy in world trade. Maximum and minimum limits of the price ranges should be subject to continuous study by the corporation and adjustments made according to basic trends of normal demand and supply.
- e. Abolish export subsidies; they perpetuate maladjustments, invite retaliatory tariffs which transfer dollars into foreign treasuries, and hinder expansion of trade.

#### *F. Prices and Adjustments*

The problem of adjustment is to redistribute production capacity. Policies to encourage adjustment include:

1. Plan immediately for an *integrated* de-control policy of subsidy removals and the gradual abandonment of price controls in order to avoid serious producer and retail price disruptions.
2. Remove A.A.A. restrictions such as those penalizing long staple cotton production in the "new lands" of the Mississippi delta.
3. Institute an international agricultural statistical agency comparable to the I.L.O. for providing necessary economic information relating to prices, costs, production, exports-imports for commodities by countries and regions, thereby enabling farmers to make better decisions not based primarily on habit.

#### *G. Prices and Agricultural Fiscal Policy*

Farmers should be given support to remove some risk taking

from their enterprise to the same degree as exists in other industries. *We should pursue a price policy which seeks to counteract cyclical movements in the price system and not to perpetuate secular maladjustments.*

*Certain palliatives for agricultural relief are necessary. Some price pegging plans for farm products are undoubtedly vital in the interest of short run economic stability, but where price supports are practiced they must rest upon a sound foundation of productivity and national income. Any solution to the surplus problem is contingent upon high levels of employment, productivity, consumption, and national income. Unfortunately, past price programs have dissipated their energies upon all types of restrictionist schemes, which over the long run can benefit neither the producer nor the consumer. A positive approach to finding markets for our agricultural production should be directed to attainment of high levels of national income and employment.*

*The first step is to expand the home market. A 10% increase in income in lower income families will have a much higher effect on total food consumption than a similar increase in income in higher income groups.*

The market economy needs overhauling so that it can withstand rough times which it weathered so miserably between the two wars, and also needs better rules of law that will permit adjustments not based upon mere arbitrary decision as in the past. A price policy for agriculture should reflect the operations of a freer market, thereby directing shifts among commodities into the most desirable combinations of production. Moreover, the price policy should be so devised that it would necessitate a minimum of government interference with the market mechanism in quest of ostensibly aiding particular interest groups. The price policy as outlined above is the only one compatible with promoting adequate and more stable income from farming, and encouraging a dynamic, progressive, and healthy farm economy.



*An Honorable Mention Paper*

A PRICE POLICY FOR AGRICULTURE, CONSISTENT  
WITH ECONOMIC PROGRESS, THAT WILL  
PROMOTE ADEQUATE AND MORE  
STABLE INCOME FROM FARMING

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THE price policy for American agriculture in the past has been characterized by miscellaneous purposes and methods. To assure production of wheat and hogs in World War I their prices were supported. In World War II prices of many more commodities have been supported for the same reason. Price policy from 1929 up to, and for some products even including, World War II has been concerned with improving farm income. Price pegging under the Federal Farm Board and loans by Commodity Credit Corporation have been used to increase farm income. Real dangers to agriculture result from this practice, for no economy can be healthy which produces products not wanted—which makes relatively ineffective use of its resources.

The price system provides the mechanism for allocating scarce means among competing ends. Price tends to channel productive factors into uses yielding maximum satisfaction. It rations scarce supplies.

There is no clear understanding among agricultural policy makers as to the role that price policies play nor particularly what might be accomplished by modifying them through a conscious price policy. With the exception of the war periods the objective has been to increase the income going to farmers by lifting the level of prices paid or at least by preventing their decrease.

The parity price program has had one objective of justice in which the "just price" bore a relationship to real or fictional prices existing in the 1910-14 period. Neglecting relative increases or decreases in production costs as well as demand changes, the parity program has attempted to tie present day prices to those existing over three decades ago. These prices are based not upon the need for the product, not upon the best use of resources, but upon a statistical happenstance. Apparently they are subject only to revision upward by political pressures. That there is danger in the

continued use of "parity price" is indicated (1) by the fact that crops not greatly needed may be produced to the extent that others more necessary will be neglected, (2) that supplies of some products may become so great that the market will not absorb them, and (3) that political pressure groups may make impossible any hope of its working and bring only collapse by continually forcing upward guaranteed prices in terms of percentage of parity.

*Policy Modification.* A price policy for the future must first allow the best use to be made of resources.<sup>1</sup> Prices must, therefore, be used to direct resources into the production wanted by the people. For this purpose the aims of the proponents of forward pricing are admirable in that they would have a government group set prices which would bring out the desired production. The vulnerability of this method to political pressures, as evidenced by the legislative increases in price guarantees as percentage of parity, leaves little hope of administration like that intended.

A plan less susceptible to these pressures is needed. One based on objective data and directed to effective use of resources is needed. In the price plan to be outlined it will be necessary to determine the price for a product which will clear the market over a period of time, adjust this price to each production season, and fix the price in terms of percentage of this norm. The plan suggested, a form of forward pricing based on objective data, may not direct resource use as satisfactorily as forward pricing by committee action operating perfectly. However, political pressure groups would doubtless not let the latter operate perfectly, so that it would be little better than the parity program in directing resource use. The operation of the suggested plan is, however, based upon calculations by formula from market data.

Free market prices in the past have brought about changes in production over long periods of time but not over short periods.<sup>2</sup>

<sup>1</sup> Some writings on this include:

D. Gale Johnson, "Contribution of Price Policy to the Income and Research Problems in Agriculture," this JOURNAL, Vol. XXVI, No. 4 (Nov. 1944), pp. 631-664.

Geoffrey Shepherd, "Bases for Controlling Agricultural Prices," this JOURNAL, Vol. XXIV, No. 4 (Nov. 1942), pp. 743-760.

— *Agricultural Price Control*, Iowa State College Press, 1945.

T. W. Schultz, "Economic Effects of Agricultural Programs," *American Economic Review*, Papers and Proceedings, Vol. XXX, No. 5 (Feb. 1941), pp. 127-154.

— *Redirecting Farm Policy*, Macmillan, 1943.

<sup>2</sup> Shepherd, Geoffrey S. *Agricultural Price Control*, Iowa State College Press, 1945, pp. 4-16.

Acreages remain relatively constant but yields cause wide variations in production. Production adjustments to price cannot promptly be made, but may take five, ten, or more years as the growing characteristics of the product vary. In addition there are some situations in which farmers' costs can be reduced by increasing price stability.<sup>3</sup> It is the aim of the plan presented, therefore, (1) to establish prices which will bring the production of resources needed, and (2) to introduce no more price fluctuation than is necessary so that farmers may have a reasonably stable income. The objective is to stabilize prices in agreement with resource use—not to lift prices.

Prices established before the production season gets under way, on the basis of prospective market demands, enable the farmer to plan and adjust his production to those needs. In addition the amounts of products produced will tend to be in line with those taken in the market.

The plan of pricing as first presented applies to goods which (1) can be stored beyond one crop season, and (2) are not exported in significant amounts. Modifications are then made for perishable products, and a different plan is suggested for products exported.

*The Plan.* The prices set by this plan are determined by changing conditions of the market. They should be announced in advance of the production period to which they apply. To prevent confusion the prices thus determined are called "norm-prices." A price guaranteed by the government may be any percentage of this norm-price.<sup>4</sup> In fact for some products for which data may not be as reliable as desired it might not at first be wise to guarantee the full amount. The norm-price in the plan is based upon the average price<sup>5</sup> existing for the previous marketing season which is modified by the change in total supplies<sup>6</sup> available. If supplies are greater the norm-price will be lowered, if they are smaller the price will be raised. The extent of the change will also be influenced by the elasticity of demand for the product. The following steps would be necessary:

1. Determine average price received.
2. Ascertain change in total supplies.

<sup>3</sup> Brownlee, O. H. "Some Considerations on Forward Prices," this JOURNAL, Vol. XXV, No. 2, (May 1943), pp. 497-499.

<sup>4</sup> Unless otherwise indicated it is assumed that the full norm-price is guaranteed.

<sup>5</sup> The price received by farmers.

<sup>6</sup> The method of determining total supplies will vary with products.

3. Determine the coefficient of elasticity of demand.
4. Modify average price received by price differential based on supply and elasticity factors to obtain norm-price.<sup>7</sup>

Determination of a norm-price would be done in the following manner. Suppose that the average price for the preceding year was \$1.25 per bushel. If the total supplies were the same as a year earlier the norm-price would be set at the same level. If total supplies are larger the norm-price would be fixed at a lower price for the product. Approximations based on unit elasticity would probably be satisfactory temporarily at least for products for which adequate demand curves were not available. For example, if the total supplies were 10 percent larger than the year before the norm-price would be decreased 10 percent, or \$.125 to \$1.125 per bushel. Similarly a decrease in total supplies would be accompanied by an increase in the norm-price. An increase of \$.125 to \$1.375 per bushel would follow a decrease in supplies of 10 percent.

Corrections made on the basis of the elasticities<sup>8</sup> of demand would be preferable to the assumed unit elasticity. If again the average price were \$1.25 per bushel in the year immediately preceding the increase in supplies equal to 10 percent and the coefficient of demand elasticity were  $-.7$  the norm-price for the coming year would be

$$1.25 + \left( 1.25 \times \frac{10}{100 \times (-.7)} \right) = 1.25 - .18 = \$1.07 \text{ per bushel.}$$

In this case the formula could be set up

$$np = ap + \left( \frac{ap \times s}{100e} \right)$$

where

$np$  = norm price

$ap$  = average price for preceding year

$s$  = percentage change in total supplies

$e$  = coefficient of demand elasticity

The formula might also be modified by giving some weight to acreage changes.<sup>9</sup> Conceivably temporarily high yields might cause

<sup>7</sup> Additional modifying factors may be added such as acreage change.

<sup>8</sup> The coefficient of demand elasticity may not be constant or linear for all sizes of supplies offered for sale. Research will determine how it varies with quantity of product.

<sup>9</sup> It may be desirable to add other items also in some cases.

total supplies to become so great that the norm-price following would be so low that production under normal yields would be cut to much less than the amount usually consumed. To prevent acreage from being cut too sharply following high yields, or to prevent acreage from being expanded too greatly following low yields, some weight might be given to acreage changes. Should equal weight be given to supply change and to acreage change, the formula (with  $a$  equal to the percentage change in acreage) would be:

$$np = ap + ap \left( \frac{s + a}{200e} \right).$$

In the case of unequal weights the formula would be:

$$np = ap + ap \left( \frac{cs + da}{100(c + d)e} \right)$$

where  $c$  is the weight for supply change and  $d$  the weight for acreage change.

For some products a seasonal variation in norm-price may be necessary because of wide seasonal variations in market prices. Without such a seasonal correction all products would have the same price support regardless of the time of the season at which they were marketed. As these seasonal corrections would considerably complicate the operation of a price support program they probably should not be used except in cases of extreme variation. If used their size should be in agreement with average seasonal differences over a period of years. Norm-prices should also vary with the grades of products. Price differentials in agreement with average market differences should be set up so that the norm-prices will give relatively uniform support to all grades. In that manner the producers of neither high quality nor low quality products will be penalized. Regional price differences will also be necessary, for with most agricultural products transportation costs account for large shares of the prices of products in terminal and consuming markets. Area price differentials have been used under the loan programs.

A change in the demand in addition to a change in supply may also affect prices of farm products. This change, however, is accounted for, at least partially, by basing the norm-price upon the preceding annual average prices and correcting it by supply

change and elasticity factors. This follows since the norm-price is not read directly from the demand curve, but only the coefficient of demand elasticity. The elasticity might differ slightly with a marked change in the demand curve, but even so it would have little effect on the norm-price.<sup>10</sup> There would be, however, some lag in price adjustment to demand changes.

The plan would not adjust immediately to major price changes. If it would adjust immediately to price changes there would be no stabilizing effect and consequently no object in using the plan. In case the market price drops below the guaranteed percentage of the norm-price the government will enter the market and buy all of the product offered at that price; or, if the loan method is used, will take the commodity if the farmer does not wish to redeem it at the guaranteed percentage of norm-price. It is important that the government should be allowed to sell the product so obtained whenever and wherever it wishes so that supplies will not be held almost indefinitely. Some price gains will at times result from holding these supplies and they will partially at least balance out losses which may come from ownership costs greater than market prices. Undoubtedly the government will have losses in some years.

Adjustment to the new plan very likely should not be made abruptly but over a period of several years. A gradual shift from the existing pricing method to the one proposed would tend to lessen the difficulty of making farm adjustments. First, the prices would be supported on the basis of the norm-price. Second, the government would pay to the producer a sum which when added to the market price would be equal to the norm-price plus perhaps two-thirds of the difference between the norm-price and parity price in the first year, and one-third of the difference in the second year. No payment would be made the third year. The adjustment might be made more rapidly or more slowly than the figures indicate to meet the needs for each of the products produced. It may be necessary to give direct education and aid to some producers shifting from the production of crops no longer needed in the same relatively large volume.

*Perishables.* Modifications of the price plan will be necessary if it is applied to perishable products which are in the main utilized

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<sup>10</sup> In previous illustration an increase of 10 percent in supplies gave a norm-price of 1.07. If the coefficient of elasticity decreased to  $-.6$  the norm-price would be \$1.04 or a difference of 3 cents.



within the United States. The same general method of pricing would be used by correcting the preceding average price by a factor based on the change in indicated total supplies and the coefficient of elasticity of demand.

As the storage supplies of perishable products would be at most relatively small they would not add much to the picture of total supplies. An indicated supply figure might have to be supplemented<sup>11</sup> on the basis of feed supplies and prices, for livestock products. The problem would be more difficult with fruits and vegetables. It might be necessary to use acreage or similar data—some of which would have to be based on intention reports in relation to price ahead of the production season. This relative inadequacy of data may make desirable price guarantees less than the norm-price.

Storage of the product for extended periods of time is impossible. Consequently, products obtained by the government in maintaining prices must be promptly used. Efforts certainly should be made to make effective use of these products by distributing them to low-income groups, school lunch groups, or others, in either fresh or processed form.

The pricing plan is complicated by the length of the production periods which vary greatly among the perishable food products. Fruits and vegetables, butter, hogs, and cattle<sup>12</sup> have periods of different lengths, and in addition the production of each has varying degrees of continuity. Prices for them should be announced before the production period starts. In addition for products produced continuously new prices should perhaps be announced quarterly or even more often.

Inasmuch as seasonal variations in perishable products are relatively large, similar adjustments in the norm-prices likely should also be made.

*Products Exported.* Sale at world market prices without production control or export subsidies is recommended for exported products as wheat and cotton. The use of a norm-price in the sense that it was recommended for products not exported is not possible. Were prices set above those prevailing elsewhere (including

<sup>11</sup> Considerable amounts of some products go into storage for appreciable periods. As some products can stand almost no storage, storage data would be of no aid in determining indicated supplies.

<sup>12</sup> Stabilizing effects of prices on feeds will also tend to stabilize prices of livestock and their products.

transportation costs) the products would flow into this country. The immediate job is to provide a means of transition from the relatively high prices prevailing in the nation now to the lower prices of the world market.

One method of adjustment would reduce regularly the support in terms of percentage of the difference between market prices and parity prices previously guaranteed over a period of possibly three years. The product would be sold at the prevailing (world) market price, and the difference between this and the parity prices paid to the farmer. For example, in the first year after the plan is placed in operation the farmer would receive the regular market price for his product. He would also receive an extra payment from the government of two-thirds of the difference between parity price and the average market price for the year. In the year following he would receive one-third. In the third year no extra payment would be made. The period over which this adjustment is made might be made longer but probably not shorter.

*Multiple Price Plans.* The benefits which might come from discriminatory pricing, as a food stamp plan, are limited. Such programs in the past have had a dual purpose. They have been carried on (1) with the aim of improving the nutritional level of low-income families and (2) with the object of increasing farm income through selling surplus crops under a dual price system. The two objects may be conflicting. In addition the effects upon the farm income are limited.<sup>13</sup> Gains which may result will tend to decrease as time goes on as a result of production increases when marketing margins will again approximate their earlier levels. Furthermore a food stamp plan apparently cannot concentrate consumption on specific products—as surplus products. The consumption can be increased only of those foods consumers want to buy.<sup>14</sup>

*Aids to Producers.* Periods of depression may necessitate aid to farmers to avoid hardship and to prevent too serious injury to the agricultural production plant. The major cause of reduced farm incomes in these periods is not found in lack of competitive pricing

<sup>13</sup> Shepherd states that the increase in total returns would probably not be over 4 percent where the demand curve is a straight line which he considers typical for agricultural products. See his article, "Price Discrimination for Agricultural Products," this JOURNAL, Vol. XX, No. 4 (Nov. 1938), pp. 805-806.

<sup>14</sup> Geoffrey Shepherd, *Agricultural Price Control*, p. 179.

or inadequate marketing facilities, but rather in a decrease of demand for farm products following unemployment and reduced incomes in non-agricultural enterprises. Agriculture will not be helped, therefore, by raising its prices or by cutting production, which may further aggravate the problem.

The government may find it necessary to give direct aid to farmers to keep the necessary farm production plant in operation—to prevent large-scale hardship and abandonments. How large would such aids need to be? This aid must be at least slightly in excess of the variable costs of the farmers whose production is needed. The variable costs must be covered for a number of years—not just one or two. As variable costs are a relatively small portion of total costs for short periods and may approach total costs over a long period of time, the relative size of the aid granted would be dependent upon the length of time over which the depression would stretch.

The aids should be granted to producers and not be price raising measures which would interfere with the use of resources. Neither should they be tied to cuts in production. The object of payment is to permit the operator to continue operations through the depression period without injuring his productive plant.

*Market Improvement.* Continuous efforts should be made to make the agricultural market more nearly perfect and more efficient. More information about production and marketing is needed. Outlook work could be expanded and improved so that producers would know more of what to expect of market possibilities for the immediate future and several years ahead. A great expansion in market news service down to country marketing points would give farmers more nearly adequate information for use in marketing their products. Likewise the expansion of grading and standardization down to country points would be of aid. These are needed (1) if price is to be the regulator of the type of product wanted, and (2) if producers are to receive prices based upon the relative values of their products. Along with these the further use of marketing research will help evaluate marketing practices and suggest remedies for some problems.

*Summary.* Prices are the means of directing the use of resources. If prices are permitted to adjust to market conditions the best use of resources will be approached. The plan suggested permits

prices to adjust to the market situation as the norm-price is based on the preceding average price of the marketing season corrected by supply and demand elasticity factors. It is intended that the use of norm-prices will (1) allow the best use of resources, (2) aid farmers in making their production decisions, and (3) stabilize prices by eliminating unnecessary price fluctuations. The plan applies to all products except those exported in appreciable quantities, whose prices would be allowed to reach the world price level over a short adjustment period.

*An Honorable Mention Paper*

A PRICE POLICY FOR AGRICULTURE, CONSISTENT  
WITH ECONOMIC PROGRESS, THAT WILL  
PROMOTE ADEQUATE AND MORE  
STABLE INCOME FROM FARMING

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A PRICE policy for agriculture is concerned with two principal problems. First, the level at which farm prices should be maintained. Second, the methods or mechanics by which this level is brought about. In any present-day consideration of these two problems, a distinction should be made between: (1) the war and immediate transition years; and (2) the long-run, postwar period.

During the war, and for two years after the January 1st following the date upon which hostilities are declared to have ended, a *minimum level of prices* at 90 percent of parity (92½ percent for cotton) has been set by the Federal Government for the following farm commodities: corn, wheat, tobacco, rice, and peanuts for nuts; hogs, eggs, chickens, turkeys, milk, butterfat, dry peas and beans of certain varieties, soybeans, peanuts and flaxseed for oil, American-Egyptian cotton, potatoes, and cured sweetpotatoes. The first six are known as "basic commodities," and the minimum support levels of not less than 90 percent of parity are to be maintained by means of commodity loans. The balance of the list are known as "Steagall commodities," and their prices are also to be maintained at not less than 90 percent of parity, but the method by which these prices are to be supported may be by loans, purchases, or other operations.

Thus, the Government has set a minimum level below which the prices of a large proportion of important farm commodities shall not fall. Moreover, for the six "basic commodities," it has indicated that this minimum level must be supported by means of commodity loans. In addition, ceiling prices are in effect for all farm commodities, or the finished products thereof, as a part of the general economic stabilization program. The result, therefore, is that both maximum and minimum prices are now in operation. They determine the general level of farm commodity prices, which is now well above parity. Farmers, consequently, have incomes which, in gen-

eral, are quite favorable, and which are high enough to compensate them for the long period of relatively low incomes during the 1930's. The price ceilings and floors, together with producer and distributor subsidies, form the basic mechanisms by which the present price level is maintained.

Should this policy, already in effect, be significantly altered in the near future? The answer to this question must be in the negative. There may, of course, need to be minor adjustments in price ceilings from time to time, but approximately the present level of ceilings should be maintained until supplies are ample to permit the removal of rationing and, at the same time, prevent inflationary price rises. The commitment for maintaining minimum support-prices at not less than 90 percent of parity has been made by both the Congress and the executive branch of Government. This commitment should be carried out without equivocation. The farmers of the nation have accepted the commitment of their Government in good faith, and have brought forth a surprisingly large volume of greatly needed food. A part of this food production has, no doubt, resulted from the guarantee against a possible drastic decline in prices immediately following the end of the war. For Government to break faith with these producers by attempting to "squeeze out" of its commitment is wholly unacceptable.

There is, however, one modification which should be made in the existing price-support legislation. There should be a definite time limit to the period for which the price-support commitment applies. As the law now stands, prices are to be supported during the war, and "the two year period beginning with the first day of January immediately following the date upon which the President by proclamation or the Congress by concurrent resolution declares that hostilities in the present war have terminated." It was about 2½ years after the Armistice in 1918 before there was a formal declaration ending hostilities.

Because of the problems involved in occupying enemy territory, and the time which must necessarily elapse in working out the terms of the final treaties of peace, there may be good reasons for our Government to delay a formal declaration, ending hostilities in the present war, until long after the fighting has ceased. If such should be the case, the present price-support commitment pertaining to agricultural products might presumably be in effect for a long and indefinite period. Nevertheless, there will be a need for adjusting



agricultural production to the peace-time situation as soon as possible after the shooting stops. There are good grounds, therefore, for Congress to amend the present price-support legislation so that it does not extend beyond two full crop years following the formal surrender of the Japanese military forces. Such an amendment would not be a breaking of faith with farmers. It would, in fact, merely bring the technicality of the law into line with what most people, including farmers, expect.

Other than this proposed amendment to existing price-support law, the main price problem during the transition period is not how best to change existing policy, but how to carry out the price commitments which the Government has already made to farmers. The principal methods by which this is done may set the pattern for many years ahead. Certainly, they should be selected with the long-time problems of agriculture clearly in mind. Fortunately, the best ways in which the existing price commitments can be carried out also constitute a series of related courses of action which should form a major sector of a sound long-time price policy for agriculture.

If the existing price-support legislation is limited to the first two crop years following the cessation of active fighting in the Pacific, the problem of supporting the prices of farm commodities at 90 percent of parity is not likely to present any serious difficulties, except with respect to certain crops which will be discussed later, *provided the consumption of farm products can be maintained at high levels*. This proviso, however, is extremely important. Indeed, it is the key to the problem of carrying out the existing commitments during the transition years. But it is more than that. It must be one of the overwhelmingly important parts of a sound long-time price policy. Hence, much of the problem of molding an adequate agricultural price policy, for both the transition period and the years to follow, is embodied in the question: How can a high level of consumption of farm products be maintained?

There are four courses of action which should be followed to maintain a high level of consumption. First, the nation should have a comprehensive policy for maintaining full employment, under which the Federal Government assumes the responsibility for preventing the number of unemployed from exceeding approximately 4 percent of the labor force. Second, there should be a comprehensive policy for activating and expanding foreign trade. Third, there will

be need, even under conditions of full employment, for special programs to increase the food consumption and improve the diets of low-income families. Fourth, special provision should be made for the removal of temporary market surpluses of perishable commodities, such as fresh fruits and vegetables.

These four courses of action should become integral parts of a comprehensive policy for agriculture. Collectively, they can form a necessary bulwark against a declining demand for farm products. Within a year after the end of active fighting in the Pacific, all four of them may need to be invoked. Certainly, well-rounded policies for maintaining full employment and activating foreign trade will be necessary immediately after the end of the fighting. On the other hand, heavy requirements for relief feeding in foreign countries may not necessitate an immediate nation-wide program for increasing the food consumption of low-income families. Nevertheless, such a program should be inaugurated on a modest scale within the next 12 to 18 months, in order that needed experience for its future expansion may be gained.

The maintenance of full employment will involve a series of co-ordinated actions, on the part of private businessmen, organized labor and governments, in many fields of activity. The crux of the problem is to maintain the total of consumption and investment expenditures at a level high enough to take the total output of a fully employed working force. First attention should be given to Government policies which encourage a high level of *private* consumption and investment expenditures.

Some of the major steps that are necessary along this line are: (1) the elimination of monopolistic practices and similar restraints to production and trade; (2) a postwar revision of Federal, State and local taxes to reduce regressive excise, payroll, and general property levies in order to stimulate consumption, and an altering of corporation and high-bracket personal income taxes so as to stimulate business investment; (3) broadening the coverage and increasing benefit payments of social security programs, while financing a larger proportion of the social insurance funds from less regressive tax sources than at present; (4) maintaining a policy of low interest rates, through fiscal and monetary means, as a stimulant to investment; (5) the organization of a permanent and efficient national employment service which will effectively bring job-seekers and jobs together; and (6) raising the level of minimum wages, while

requiring by law, both labor and management to exercise more stability and responsibility in employer and employee relations. If these and other actions of this general character are not sufficient to maintain full employment, the Federal Government should take the responsibility for financing, and carrying out in cooperation with State and local governments, a public works program in sufficient volume to counteract the cyclical swings in private business activity.

The activation of foreign trade will involve such actions as: (1) a lowering of tariffs, and the removal of quotas and other import restrictions throughout the world; (2) international collaboration to bring about a stabilization of foreign exchange rates; (3) substantial loans from private and public agencies in the United States to foreign countries to aid in the reconstruction of war-torn areas, and to encourage the industrialization of underdeveloped regions of the world; (4) international collaboration in collecting and disseminating a wide range of economic information pertaining to production, consumption, price and marketing conditions in all countries; and (5) most important of all, adequate international machinery for maintaining peace and freeing the world from the constant threat of war.

The increased consumption of food among low-income families can best be brought about by the Federal Government augmenting their purchasing power in a manner that will encourage them to spend the increase primarily for food products. A program of this nature could be implemented by any one of several different methods. The prewar Food Stamp program represents one approach. There are others, which have definite advantages over the old Food Stamp plan.<sup>1</sup> The results of the Federal Government increasing the food-buying ability of low-income families would be: (1) greatly improved diets among such families; and (2) substantial increases in the demand for farm products. Moreover, by expanding or contracting the program, according to fluctuations in private employment, it could operate in part as a counter-measure to the swings of the business cycle and to annual variations in crop yields.

A program for removing temporary surpluses of perishable commodities would involve two main lines of action. First, the Federal Government should provide a service which forecasts the probable

<sup>1</sup> See, for instance, the method proposed by the Aiken-La Follette, National Food Allotment bill (S. 1151, 79th Congress).

supply of these commodities a few weeks in advance of their appearance in the markets, and, in case of a prospective oversupply, encourages the large distributors and users of food, such as chain-stores, hotels and restaurants, to inaugurate special campaigns to sell or use larger than average amounts of such commodities during the short periods of market gluts. Second, in extreme situations, the Federal Government should purchase perishables that are in temporary oversupply and give them to school lunch rooms and eleemosynary institutions which feed large numbers of people.

These four main lines of action to maintain a high level of demand for farm commodities—the maintenance of full employment, the activation of foreign trade, the special encouragement of consumption on the part of low-income families, and the removal of temporary surpluses of perishable crops—should be the only methods by which the Government maintains the prices of *a large number* of farm commodities. They can be the means, along with a program of production goals and adequate outlook work, by which the existing price-support commitments of the Government are carried out during the transition period, for most farm products. Moreover, they should form the backbone of an agricultural price policy in the postwar years ahead. This means that they must be widely recognized by farmers as being as much a part of agricultural policy as crop control, commodity loans, and marketing agreements have been in the past.

If these policies are fully, efficiently, and courageously put into operation, the prices of livestock, poultry, dairy products, feed grains, tobacco, and practically all fruits and vegetables, will be automatically maintained at levels well above the present minimum guarantees. Moreover, the methods involved will not require a regimentation of farmers, or a discrimination against other groups in society. The entire population, including rural youth and thousands of small farmers on submarginal land, will benefit from the job opportunities that a full-employment economy will offer. At the same time, agricultural production can shift to the most efficient producing areas, and costs thus be reduced.

As important, however, as these policies will be in maintaining an adequate demand for farm products, and, hence, an adequate income for farmers, they cannot be expected to represent a complete and equitable agricultural price policy. It is possible, for in-

stance, that these measures alone would not be sufficient to carry out the Government's price-support commitments, during the transition period, for such crops as wheat, cotton, rice, peanuts, soybeans, flaxseed, and potatoes. How shall the problem with these crops be met? Three of them—cotton, wheat, and rice—are important export commodities. If producers of these crops are to retain sufficiently large foreign outlets, the prices of these commodities cannot be maintained above world market levels. However, a world market price, during the transition period, for these commodities maybe well below the level of 90 percent of parity now guaranteed by the Government, and probably would not measure up to the standards of a fair and equitable price in the postwar years. A greatly expanded production of most of these crops, including potatoes, dry beans and peas, has been encouraged by the Government as a war measure. There is, therefore, considerable responsibility on the part of the Government, over and above its present price commitments, to cushion the producers of these crops against drastic price declines as they adjust their production to the peacetime situation.

The best way in which the Government can do this is to allow the prices of this whole group of commodities to seek free market levels, and then make payments to producers on an annually descending proportion of the difference between market price and a revised parity price, during the next 5 to 10 years. The needed revision in the parity formula is two-fold. First, the wages of hired farm labor should be included in the index of prices paid by farmers, and, correlative with this change, farm wage workers should be protected by a minimum wage law which guarantees them 40 cents an hour for a 40-hour week, with time and one-half for overtime. Second, the present parity base period of 1910-14 should be moved forward to a much more recent period, so that advances in farm technology would be taken into account.

As a supplement to this type of price policy for the commodities not equitably priced by maintaining a high demand for agricultural products, there should be a comprehensive production adjustment program in the South and the Great Plains, which would aid cotton and wheat producers, through loans and liberal farm adjustment payments, to turn more heavily to the production of livestock, poultry, and dairy products on adequate family farms.

*An Honorable Mention Paper*

A PRICE POLICY FOR AGRICULTURE, CONSISTENT  
WITH ECONOMIC PROGRESS, THAT WILL  
PROMOTE ADEQUATE AND MORE  
STABLE INCOME FROM FARMING

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FOR two to three years after the war, the government is committed to support prices of many farm products at not less than 90% of parity, according to the Steagall Amendment and related legislation.<sup>1</sup> For the reconversion period (i.e. probably through 1947 or even 1948), therefore, the major outlines of farm price policy have already been established.

What kind of price policy should succeed the "Steagall Period"? We shall assume that the government will be called upon to continue administering farm prices in some form, and that it will attempt to do so in the interest of general economic welfare rather than according to the wishes of a powerful pressure group. Although farmers will be the immediate beneficiaries, as long as the consumption levels of other groups with similar or lower real incomes, and national income as a whole, are not reduced as a result of the policy, that policy can be taken to improve general economic welfare.<sup>2</sup>

*Objectives of Farm Price Policy*

Farm price policy should serve three basic objectives:

- (1) *to protect aggregate farm income* against the disproportionate burden which a general collapse of prices inflicts upon the farm community;
- (2) *to induce production and cost adjustments* in line with changes in the demand for individual products.
- (3) *to permit a steady flow of farm products into consumption* (and exports) without diverting products to lower uses or reducing the total volume of farm production.

<sup>1</sup> For a concise statement of reconversion farm price policy, see the paper by R. H. Shields, Solicitor, WFA, "Federal Statutory Provisions Relating to Price Support for Agr. Commodities." Aug. 16, 1944. U.S.D.A. (mimeo).

<sup>2</sup> See A. C. Pigou, *Economics of Welfare*, 4th Edition, London 1932, Part I, Chs. VII and VIII; and N. Kaldor, *Welfare Propositions in Economics*, *Economic Journal*, Sept. 1939.



Existing parity price guarantees meet the first objective fairly well, but fail to meet the second and third. Free market prices would tend to meet the last two objectives, but would fail to meet the first. The primary function of price policy, in the absence of an appropriate income distribution policy, should be to combine the general farm income effect of the existing parity price program with the production and consumption effects of free market prices. In fact, price policy should substantially improve upon the often erratic and unpredictable performance of free market forces.

Price policy is *not* a sufficient means for providing income parity in terms of equivalence of real-income opportunities in farm and non-farm occupations. It is utterly inappropriate for eliminating income disparities between farms or even between agricultural regions. We are sorely in need of an income policy designed to increase farm welfare—and general welfare for that matter—by improving personal income distribution and establishing minimum consumption standards of health and decency. That, price policy cannot do.

What should be expected from price policy is to stabilize the terms of exchange between farm and non-farm products as a whole, and to improve the allocation of farm resources among the various lines of production by reducing the uncertainty of future price expectations and by keeping intercommodity price relationships in line with changes in demand and costs. It is important to realize this limitation of price policy because the basic intent of existing parity price legislation is clearly to implement the goal of "equality for agriculture" and "parity income for farmers." Price policy alone cannot attain that goal.

The first two objectives of income protection and production guidance must be accomplished subject to the general welfare condition that the price policy should not reduce total consumption of farm products as a whole, nor should it have the effect of shifting consumption from lower to higher income groups. This condition can be formulated as a third basic objective of permitting a steady consumption flow without reducing aggregate farm output or causing waste.<sup>3</sup>

<sup>3</sup> Output reduction caused by under-employment of existing resources depresses welfare in two respects: it reduces total consumption, and worsens the real-income distribution, because the attendant price increase usually results in the lower-income groups restricting their consumption relatively more than the higher-income groups,

*Outlines of a Farm Price Policy*

In sketching the main features of a price policy designed to meet the three basic objectives of farm income protection, production guidance, and steady consumption flow, a fairly close resemblance to current lines of policy has been preserved. Although there are powerful economic arguments against the parity price concept, it has become so firmly inbedded in the thinking of farm organizations and in farm legislation that a complete departure from parity prices in postwar price policy may not be politically feasible. Moreover, in the absence of an appropriate income policy, the parity price concept has some merit.

Here are the outlines of the proposed program:

1. *The government promises farmers to protect agricultural income as a whole against a general price decline by supporting the over-all composite index of prices received by farmers at parity with the index of prices paid by farmers.*

Each year, the government announces in advance a set of support prices for individual farm products, whose combined index, weighted by the production goals (see below), equals the index of the prices farmers are expected to pay for the things they buy. If during the year the "prices paid" index should deviate from the anticipated level by more than a stated amount, all current support prices would be adjusted accordingly by a flat percentage increase or decrease.

When changes in technology and cost structure should bring the "prices received" and "prices paid" indices out of line, they should be adjusted by changing the base period and the composition of the indices.<sup>4</sup>

As long as farmers maintain the over-all volume of output under these conditions, their income will not suffer from a general price decline more than roughly proportional to that of other major groups in the economy. Farmers' claim for income protection rests upon the differential behavior of prices and production in agriculture and industry. Farm prices during a depression usually drop farther and faster than most

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<sup>4</sup> The present base period of 1910-14 cannot be justified on economic grounds. The most recent period of reasonably full employment, or a 5-year moving average would constitute a much more adequate base period. The problems involved in computing parity price formulae are not discussed in this paper; they represent part of the building material, not the architectural design, of a price policy edifice.

prices of non-farm products, and so does farm income. For instance, the index of net farm income per person gainfully employed in agriculture (1935-39=100) reached a low of 42 in 1932 as compared to a low of 78 in the index of wage income per employed industrial worker in 1933.<sup>5</sup>

The annual variations in the index of aggregate farm production are very much smaller than those of prices or income. The index (1935-39=100) shows a steady upward trend from 82 in 1910-14 to 133 in 1944. Since 1915, there were only 3 years (1921, 1929 and 1932) in which the index dropped more than 3 points below the preceding year. The volume of aggregate farm output, therefore, has been remarkably stable. This means that taking agriculture as a whole, a decrease in one product is usually offset by an increase in another. Consequently, aggregate farm income will be adequately protected against the effects of a general price decline by supporting the general level of farm prices.

2. *Sufficiently in advance to guide farmers in their production plans, the government announces the annual average support price and the production goal for the respective product.*

The support price for an individual product may be above or below parity, so long as the combined index of all support prices is at parity with the index of prices paid. This means that the inter-commodity price relationships are unfrozen from their base-period pattern. Considerable flexibility is thereby provided for putting individual support prices into proper relationships with respect to anticipated demand and cost patterns.

The determination of individual support prices and production goals rests upon a standardized procedure taking into account: (a) past per capita consumption rates under full employment conditions, (b) nutritional requirements and needs for special food distribution programs, (c) demand elasticity with respect to price and income, (d) cost-price ratios of farm products, (e) prospective export demand and (f) past year's general supply and demand situation modified in light of rea-

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<sup>5</sup> The fact that during a period of rapidly rising prices farm income rises higher and faster than industrial income does not compensate for the extreme vulnerability of farmers in depression. They may lose farm and home long before prices recover again.

sonably certain expectations for the coming year. Past experience serves as a valuable guide in the trial and error process of matching goals with support prices and demand. For instance, if the market price for fluid milk remained well above last year's support price, while egg prices required extensive support operations the support price and goal for milk in the next year would be raised, those for eggs lowered.

If the support prices and goals so determined combine to a farm price index below or above parity, all support prices are raised or lowered by a flat percentage to bring the index to parity.<sup>6</sup>

Forward pricing presupposes that farmers respond in their production plans to price expectations. In using forward prices as policy measures to guide production, it is the motivational aspect of how price expectations affect farmers' plans for future production that is relevant.

Farmers respond to prices primarily with respect to individual products and under conditions of alternative opportunities for shifting resources into other products which have more favorable cost-price ratios. A general decline in farm prices does *not* result in a general reduction of aggregate farm output; nor is a decrease in price of a given product likely to result in output contraction *unless* the resources of the farm can be used to produce other commodities to greater advantage.

It is reasonable to assume—and current war-time experience with forward prices seem to substantiate—that *farmers' production response to guaranteed forward prices will be stronger than their response to past prices has been.*<sup>7</sup> Fully recognizing the imperfections in farmers' price responsiveness, there can be little doubt that forward prices would facilitate production adjustments and improve the process of resource allocation.

Forward pricing would help most farmers outside the specialized cotton and wheat areas in making marginal shifts

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<sup>6</sup> Administrative considerations call for supporting only the more important farm products. Feed grain prices probably should not be directly supported, but would be kept in line by the support prices for livestock products.

<sup>7</sup> See J. R. Hicks, *Value and Capital*, Oxford 1939, pp. 125–126. Forward pricing reduces the "dispersion" of possible expected prices, and hence an important risk element. A reduction in the dispersion of possible future prices has an effect on a seller similar to that of an increase of the expected price; hence, the greater the certainty of price expectation, the larger production tends to be at a given expected price.

among individual commodities in line with demand and cost changes.—In the cotton and wheat areas, however, the necessary adjustments in production and cost structure are too drastic to be induced by price measures alone. Especially in the cotton belt, these adjustments involve far-reaching changes in type-of-farming, size of farm, reduction in the labor force, increase of capital inputs in various forms, etc. Adequate price measures can help, but more intensive complementary measures are required for bringing about the desired adjustments in these areas.

3. *Price support operations are carried out by such means as will not interfere with consumption, effective utilization and distribution of current supplies.*

Stocks should not accumulate beyond the size of a reasonable storage inventory or carry-over designed to equalize seasonal or annual variations in production. If the quantity of a certain product which the regular market cannot absorb at the support price, should be larger than what the government could efficiently distribute by means of school lunches and other special food distribution programs or store for resale through regular channels, the method of supporting prices should be *supplemental payments* to farmers or middlemen, allowing consumer prices to drop sufficiently for moving the supply, instead of surplus purchases or loans.

Three principal methods for supporting prices (or returns) to farmers are available: (a) surplus purchases or loans, (b) supplemental payments to farmers for the difference between free market and support price, and (c) processing or marketing subsidies to bridge the gap between the farm support price and consumer free market price (except for normal marketing margins). Whatever the support level may be, if the market price begins to fall below that level, any one of these methods, or combinations of them, can be used to maintain the returns to farmers for their products at support levels.

To the extent to which surplus purchases can be disposed of without waste through special food distribution programs (e.g. school lunches) or through regular market channels later on, the consumption pattern may actually be improved over what it would be under free market prices. Beyond that ex-

tent, however, this method has a most undesirable regressive consumption effect, because the removing of, say 20%, of a certain product from the market would probably result in a consumption decrease of more than 20% by the lower-income families.<sup>8</sup> *Whenever the handling of "surpluses" begins to interfere with the consumption flow, consumer prices should be allowed to drop, and returns to farmers should be maintained at support levels through supplemental payments directly to farmers or, where administratively more feasible, to distributors.*

If a particular commodity required extensive support operations, its support price as well as its production goal for the next year should be lowered, and/or special provisions for stimulating its consumption (within limits of nutritional adequacy) should be made.

#### *Need For Complementary Measures*

The effectiveness of farm price policy could be greatly enhanced by other policy measures. On the *demand side*, full employment and higher incomes in the lower-income brackets strengthen the demand for food products very substantially and offer the best assurance of satisfactory prices and incomes to farmers. In addition, any policy designed to increase the food consumption of the millions of families with incomes too low to afford an adequate diet results in an expanded and more stable market for most farm products.

A most constructive proposal is the "National Food Allotment Program" recently introduced as a bill in Congress.<sup>9</sup> This program would make it possible for any family, regardless of its income, to obtain a low-cost adequate diet. The difference in cost between what any participating family would normally spend for food and the actual cost of an adequate diet would be contributed by the government, as a public investment in the health and morale of the people. Any family would be entitled to purchase food coupons sufficient to buy an adequate diet, for a price representing 40% of

<sup>8</sup> Due to higher price elasticity of demand for foods in lower income brackets. See N. Gold and M. Enslow, *The Demand for Food by Low-income Families*. Quar. Journ. of Economics, Aug. 1943. This is not necessarily in conflict with Bowley and Allen, (*Family Expenditure*, London 1935, p. 125) who contend that price elasticity increases with income. Much depends on availability of efficient substitutes, and on the pattern of the family budget.

<sup>9</sup> See Senate Bill S. 1151, June 15, 1945, sponsored by Senators Aiken and LaFollette.



its income or 25% of the face value of the coupons, whichever is higher.

According to preliminary estimates by the author, such a program would keep the general level of farm prices (excluding cotton and wheat) close to or above parity even under conditions of unemployment. Since the number of participants and the amount of government funds contributed to the nation's food expenditure would rise with increasing unemployment and falling national income, it can be expected that farm prices of food products would *not* fall faster and lower than non-farm prices, and the aggregate volume of food consumption as well as its distribution among income groups would be kept on a fairly steady keel.<sup>10</sup>

For cotton, wheat and several other export products, the success of any adequate price policy hinges to a considerable extent on foreign trade policies. The more ingenuous we are in developing export opportunities and cooperating in international trade and credit arrangements, the less drastic will be the need for production adjustments and for price support operations.

On the *production side*, special adjustment programs will be required in those areas where the desirable shifts involve basic changes in farm organization, size of farm, labor force, capital supply, etc. Such changes cannot be brought about by price policy alone. The Old Cotton South is the area most in need of such a program. The desirable production adjustments for most other important farm products are likely to be marginal in nature, and could be induced by an appropriate program of forward pricing, production goals and educational measures.

Eventually, it would be in the interest of the nation's welfare and of farmers, if the objective of income protection were taken out of price policy and placed into a well integrated income distribution policy applicable to farmers as well as non-farm families. Price policy, then, would be concerned only with furnishing guidance in the process of resource allocation, and with stabilizing the consumption flow over time.

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<sup>10</sup> The effect of the program on the level of food prices has three major determinants: (a) government contribution to the participants' food expenditures, (b) increase in food expenditures by non-participants in their desire to maintain previous consumption rates, and (c) supply elasticity of foods. The second (b) of these may readily reach the order of magnitude of the first (a). The third (c) is bound to be small in the short run.

*An Honorable Mention Paper*

A PRICE POLICY FOR AGRICULTURE, CONSISTENT  
WITH ECONOMIC PROGRESS, THAT WILL  
PROMOTE ADEQUATE AND MORE  
STABLE INCOME FROM FARMING

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WE OUGHT to settle one fundamental question right at the outset. After the end of the war, will there be need for any "price policy" for agriculture at all, other than the policy of leaving agricultural prices to the automatic control of the open market?

There is much to be said for the open market. It operates automatically and impersonally, oblivious to political pressures. Year by year, it calls forth the production of goods in the quantities demanded, continuously correcting for changes in demand and supply, and rationing the goods out to the consumers who offer the most for them.

*Controls Are Needed to Help the Open Market Work Smoothly*

But in spite of these good features, the open market system is not a satisfactory regulator of agricultural production and consumption, particularly in the short run. It is unsatisfactory because of three inherent characteristics of agricultural production and consumption.

1. First, wide fluctuations in crop yields take place from year to year because of variations in weather. This creates surpluses one year, and shortages the next. This makes prices fluctuate so much that they are erratic and confusing guides to farmers. The year-to-year variations in the production and prices of crops that are used for livestock feed also cause variations in livestock production and prices, thus confusing the price picture for livestock as well as for grain.

2. The demand for farm products is stable in the physical sense; people need fairly constant quantities of food and clothing from year to year. But the demand expressed in terms of prices varies greatly as the national income goes up and down with variations in industrial activity. This causes severe fluctuations in the prices of farm products, as for example when the farm price of corn fell

from 80 cents for the 1929 crop to 92 cents for the 1931 crop, although the two crops were equal in size.

3. There is an inherent time lag in farmers' production responses to changes in prices. Poultry and egg production can respond within a few months, but the production of most field crops cannot be changed for a year, until the next crop is harvested; most kinds of livestock require more than a year; and some crops take several years. Thus price aberrations persist over considerable periods of time before they can be corrected.

This erratic behavior of agricultural prices has a disturbing effect on farmers. On commercialized and mechanized farms, fixed charges are high; variations in gross income cause much greater variations in net income. Some farmers—"inner and outer's" try to outguess the market, and often guess wrong. Others follow a more stable program, and do not change much even when changes are needed. All of them have to leave a considerable margin for safety, and the nation gets less food and fiber than if farmers had more accurate guides for their production plans.

These three features of agricultural production make open market prices too erratic to be good guides or regulators of agricultural production and consumption. They require that specific price controls be developed, not to replace or circumvent the free market, but to help the free market to function more smoothly and accurately in the interests both of producers and consumers.

### *Objectives of Agricultural Price Policy*

The objectives of this price policy are several in number. They can be divided into two groups—those objectives that relate to supply, and those that relate to demand.

#### *1. Objectives with respect to supply*

Different crops require different objectives with respect to supply; they therefore require different policies. One policy is required for crops that are used primarily for livestock feed—as a raw material for the production of meat and other livestock products. A different policy is required for crops that are used directly, or after only machine processing, for human consumption. There are further differences within these two major groups.

(a) *Livestock feed crops:* The objective of the price policy for crops that are fed to livestock should be to stabilize market supplies

—that is, to take out the erratic fluctuations from year to year that result chiefly from good and bad weather.

Feed crop supplies and prices can be stabilized by storage and unstorage operations which withhold the excess over average production in good years and release it in poor years. Government commodity loans, perhaps supplemented at times by government purchases and sales, appear to be a suitable technique for stabilizing supplies.

Under this policy, the price of corn would remain stable from year to year, except for changes in demand. This would help to stabilize the prices of the other feed grains, although complete stability might require storage programs for those grains, too. This stability in the price of livestock feeds would stabilize livestock production and prices and stabilize the major sources of income to corn and livestock producers. Farmers then would have more accurate price guides for their crop and livestock production plans.

This program would cause livestock feed growers' incomes from their crops to vary directly and proportionally with variations in the size of the crop. This variation could be largely overcome by a program of crop (yield) insurance, such as is already in effect for corn, wheat and cotton. In any case, the stable prices for livestock feeds would stabilize the production and prices of the major source of income, livestock.

A program of this sort would also reduce costs of production and distribution all along the line from producer to consumer; for it would stabilize livestock production, and require productive and distributive capacity only large enough to handle average production, not large enough to handle peak production at some times and stand half idle at others, as in the past.

(b) *Human food crops.* The preferable objective for crops that are used directly (or with only machine processing) for human consumption is different from the stable price objective for feed grains outlined above.

Stable prices would not work in the case of perishable crops like potatoes, for example. Those crops cannot be stored from one year to another. A large crop has to be consumed in the year when it is produced. If prices are held at the average level, the excess over average production will not move into consumption; it will go to waste. The only sensible policy is to let the prices for perishable crops vary inversely with the size of the crop. In cases where the

elasticity of the demand is approximately unity, prices could vary inversely and proportionally with the size of the crop. This would return constant gross income, rather than constant prices, to growers. In other cases, gross incomes would vary as well as prices.

In the case of durable human food or fiber crops, the situation is more mixed. Wheat is one example; cotton is another. Their prices could be held constant from year to year by storage operations, and this would permit complete utilization of the processing and distributive machinery, which would need to be only large enough to handle an average crop each year. This advantage, however, might be more than offset by two disadvantages; constant prices would unstabilize growers' gross incomes, and storing the excess from a large crop would cost more than to move it into consumption at lower prices.

The prices of these crops could best be controlled, therefore, not by a single price floor for each crop, but by a schedule of price floors varying inversely with the size of the crop. The central figures in this price schedule would be the price for an average crop. These price schedules, like the single price floors (in the form of loans) used for livestock feed crops, should be announced shortly before breeding or seeding time for the crop or product concerned. And they should extend for one production and marketing period into the future.

## *2. Objectives with respect to demand*

Changes in the demand for one or a few specific products can be met to some extent by changes in production. The most effective way to bring about a change in production is to change the price.

But this method does not work so well with general changes in demand affecting all products. If the general demand declines substantially after the war, for example, a general decline in agricultural prices would help to keep consumption up, but it would not have nearly so much effect on total production as changes in relative prices have on relative production.

This is apparently true even when organized campaigns are made to control agricultural production, like the AAA programs of the 1930's. In past reduction programs, most of the acres taken out of one crop were put into another; or if they were held idle, their fertility increased. Declines in acreages were offset by increases in yield, so that except in the case of cotton, acreage control did not

reduce production below previous levels. Presumably, the same thing would happen again if production control were attempted after the war, unless more stringent restrictions were placed upon farmers, and there would be objection to that.

Furthermore, even if production restrictions were made effective by the use of more stringent controls, reducing production would not increase farm income much. The reduction in quantity would partly or completely offset the increase in price. And it would increase hardship among people with low incomes who would not be able to buy enough food for a decent diet. Taken all around, programs to reduce agricultural production appear undesirable as well as unlikely to succeed.

#### *Measures to stabilize demand.*

Measures of a different kind are needed to meet general fluctuations in demand. They transcend agricultural policy. A whole congeries of national measures is needed to maintain a high level of employment and income in the entire economy. These measures lie outside the bounds of this paper.

If these measures are not entirely successful, recourse can be had to food distribution programs for low income groups. These programs can be directed only to a very limited extent toward specific foods, and even when conducted on a one, two or three billion dollar scale, can only partially offset changes in general demand. But they can help. The food money goes to low-income people who spend it almost as fast as they get it, and that helps to maintain general purchasing power. A program of this sort improves nutrition and helps stabilize prices at the same time.

Efforts to expand exports by means of export subsidies are obviously undesirable from a national point of view. They subsidize foreign consumers at the expense of our own, yet they are not appreciated by foreign governments, most of whom have passed anti-dumping laws. To the extent that these laws are effective, they nullify the effects of export subsidies on prices and exports, so that all the subsidies do is transfer the subsidy money from our government to other governments.

#### *Bases for Prices*

If the objectives and policies outlined above are accepted, several specific questions need to be answered. At what levels are the prices



of the various farm products to be set? How are these levels to be determined?

One answer might be: set the prices at parity. Parity provides a specific price for each crop. The term parity carries a connotation of fairness, and parity has been widely accepted and used as a guide for price policy for over a decade.

Basically, parity prices are simply the prices that existed during 1909-14 (or other base period). These base prices are multiplied by a single current index figure which reflects changes in farmers' cost since that time.

Parity prices are unsuitable guides for price controls, however, because they impose a pattern of prices which is in most cases more than 30 years out of date. In view of all of the changes in production and consumption that have taken place during those years, parity prices would result in the production of too much of some products and too little of others, so that serious surpluses and shortage would exist side by side. And parity prices per unit of production are extremely inaccurate measures of the thing that really counts—net income per farmer.

Altogether, parity is so inaccurate as a measure of farmers' economic status, and so out of date and backward rather than forward-looking as a guide for production and consumption, that it is not a workable basis for agricultural price controls.

Then what is?

### *A Workable Basis for Price Policy*

A workable basis for agricultural price controls can be outlined, in terms of procedure, as follows:

1. The first step in this procedure is to estimate consumption requirements each year for each kind of food and fiber. These estimates are to take into account productive capacity, producers' incomes, and consumers' desires and consumers' incomes. They also are to take into account any rationing of high-income consumers or subsidization of low-income consumers that may be needed; and they are to include the prospective governmental as well as private demand. The War Food Administration and USDA has been following this procedure during the present war.

2. The next step is to translate these estimated requirements into physical production goals for agriculture. The USDA has been doing this each year since 1942. These goals are physical objectives

in quantitative terms, and disagreements concerning them can be settled on objective grounds.

3. When these physical quantities have been agreed upon, the prices that will call forth the production of those quantities of each kind of food and fiber in the goals, and move them into consumption, can be determined. This determination can be based upon the reaction of producers and consumers to various prices in the past, with proper adjustment for changes in the conditions of supply. The prices can be worked out by much the same procedure as that which is followed in the preparation of "Outlook" reports. Impartial experts can be called in from all over the country, and their views pooled with those of economists in the USDA.

These three steps are presented separately in this exposition, for purposes of clarity. In actual operation, they would need to be conducted to some extent jointly, since the quantities involved in the first two steps are dependent in some degree upon the prices established in the third step, and conversely.

4. When the prices for each product have been worked out, they are to be published along with the physical production goals and used extensively as the basis for "Outlook" informational programs. These prices are to constitute the bases for loan rates and price floors and schedules which will enable each farmer to plan his production for the year ahead in such a way as to maximize his net returns and, in total, make the most productive use of the country's agricultural resources.

This procedure has been in effect with most non-basic products during the war. What is needed now is to bring agricultural price legislation up to date, along the lines that have been followed in actual practice now for several years.

Some mistakes are likely to be made in the settling of the price floors, especially initially. They can be corrected in the case of durable products by storage operations coupled with appropriate changes in subsequent price floors. These changes could be made automatic by providing in advance that whenever the accumulated stocks grew to exceed the size needed for stabilization purposes, the loan rate should be reduced by the same percentage.

In the case of perishable products, if the market price turned out to be lower than the price floor, the difference could be made up by direct payments to farmers. Thus the nation would subsidize farmers, but for increased production, not for decreased production.

*Limitations of Price Control*

There is some danger that this program, good as it may be in itself, would be distorted and perhaps wrecked by pressure to misuse it simply to raise farm prices. That might leave farmers worse off than before.

This is a real danger, and vigorous and widespread discussion of the program would be required to ward it off. If farmer's incomes need to be increased, raising agricultural prices is not the way to do it. More than that, raising agricultural prices cannot do it. Raising prices cuts down consumption and stimulates production. Surpluses appear which, in the case of perishable products, have to be dealt with quickly before they spoil. The only way to deal with them is either to let them spoil, as in the case of eggs in 1944, or to lower the price. Public opinion will not long endure the deliberate spoilage of food, and lowering prices to where they would have been in the first place means that the attempt to raise prices has failed.

The same thing is true of durable products. The only difference is that storing the surplus merely postpones the day of reckoning, and makes the eventual settlement more adverse to agriculture as accumulated surpluses break prices below where they would have been if no direct price raising had been attempted. Direct price raising is like putting a match directly to the thermostat. That does not raise the temperature of the room; it lowers it.

If the aim is to increase farmers' incomes, that cannot be done by direct price raising without throwing a monkey wrench into the distribution machinery and setting in motion forces which will soon break prices down. If farmers need larger incomes, the way to get them is to control prices only for the stabilization purposes outlined in the main body of this paper; to let goods continue to flow through into consumption; and to increase farmers' incomes by direct payments to farmers.

These direct payments could be made partly on a per unit basis (per bushel, bale, etc.) as a reward for production; partly on a production-practices basis (so much for liming, terracing, rotation, etc.) in the interests of conservation; and partly on a standard-of-living basis (so much to bring the individual standard of living up to the desired nutritional, health, educational, etc. level). These proportions would need to be changed year by year, area by area, and farmer by farmer, as conditions changed.

This method of raising farmers' incomes would be susceptible to grave abuse. There is nothing to hold in check the setting of the payments unduly high—nothing comparable to the surpluses that pile up if *prices* are set too high. The only check, aside from the depth of the public purse, is the fact that in the long run the payment method could succeed only in raising farmers' incomes to levels comparable with those that would be attained in other lines of production. If it proceeded beyond that point, it would eventually result in an accumulation, not of surplus food but of surplus farmers. It would retain more people on the farm, who would provide the total farm income pie into smaller pieces. This would eventually raise the question whether subsidies to maintain larger numbers of people in an already overcrowded industry should be continued. The problem of numbers could not be solved by restriction of entry, for agriculture already produces nearly 50 percent more people than necessary to maintain a stationary farm population.

Thus price controls plus other measures can bring farm incomes up to where they belong—that is, up to equality with incomes in other comparable lines of production. But they cannot, except briefly, keep them above that point.

*An Honorable Mention Paper*

**A PRICE POLICY FOR AGRICULTURE, CONSISTENT  
WITH ECONOMIC PROGRESS, THAT WILL  
PROMOTE ADEQUATE AND MORE  
STABLE INCOME FROM FARMING**

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**A** POSITIVE price policy for agriculture will surely be a part of our national program for many years to come. That policy is expected to promote adequate and more stable income from farming. It may also have a far reaching influence on the nation's future economic, political and social development. Its influence will spread to foreign lands, and be reflected from foreign shores. For these reasons it is extremely important that our country's future agricultural price policy be developed with the greatest care.

History shows an unmistakable trend toward definite price policies for agriculture. Earlier attempts to influence farm prices were tariffs, freight rate controls, and monetary policies. Later approaches are more direct—government loans, diversion programs, marketing agreements and production restrictions. During the war direct price controls have increased. For two to three years following V-Day Congress has pledged price supports for most important farm products at the relatively high level of 90 percent of parity.

National price policies are not limited to agriculture. Minimum wage standards have been developed for labor, and recognized by law. Federal and state governments regulate public utilities, banks, insurance companies and many other types of businesses. A national agricultural price policy is only a part, but a very important part, of a general development involving virtually every phase of the nation's economy.

The primary aim of a price policy for agriculture is to promote an adequate and more stable income from farming. This can be accomplished by adopting a policy which will enable farmers to increase the proportion of sales made during periods of strong demand. Although such direct benefits to agriculture may be substantial, indirect benefits may be even more important.

A sound agricultural price policy will help to stabilize employment and industrial production at a reasonably high level. Agri-

cultural economists have shown that farm income is quite responsive to changes in the income of industrial workers. In emphasizing this fact, too little attention has been given to the importance of farmers' purchases in supporting a high level of industrial production. Though this point needs much additional study, farmers obviously offer a tremendous potential market for farm machinery and equipment, building materials, home furnishings and appliances, automobiles and other products of industry.

A solution of the farm price problem, retaining farmers' traditional freedom to produce and to buy and sell, will do much to maintain freedom of enterprise and democratic government in America. Contrariwise, if agriculture accepts a rigid price and production control program it will greatly strengthen other groups asking for special government favors. In asking for and accepting such favors agriculture, industry and labor would surely lose their economic and political independence and become wards of a dictatorial government.

The successful solution of the farm price-income problem is sociologically important. Rural people are a stabilizing influence in the life of the nation. They furnish a young, vigorous and industrious population to renew our cities. Many leaders in business and public life come from farms. Farm life must be made economically attractive to insure a sound inheritance to the future generations of Americans.

Any practical price policy for agriculture must meet two basic tests. First, it must be politically sound in order to be adopted. Second, it must be economically sound, in order to operate successfully after adoption.

To be politically sound any price policy for agriculture must be fairly simple. It must be readily understood by farmers, farm leaders, and members of Congress. Neither farm people nor legislators will support schemes which they do not understand. Simplicity will also facilitate the administration of any policy.

To be politically sound an agricultural price policy should be a development of already accepted policies. Farmers do not want to be guinea pigs for frequently changing experiments. Furthermore, farmers expect consistency in those who represent them. Farm leaders and members of Congress cannot be expected easily to abandon policies for which they have labored for 10 to 30 years.



To be politically sound the national agricultural price policy must offer definite assurance to the producers of major commodities that they will be protected against drastic price declines. Labor has some measure of protection against loss of income in unemployment compensation. Agriculture, which produces at full capacity even during depressions, also merits some protection.

In order to be economically sound, i.e., to operate successfully, a price policy for agriculture must assure to consumers an adequate supply of food and other agricultural products at reasonable prices. There should be no paying farmers to refrain from producing needed food. Such a program would bring bitter opposition from most of the nation's citizens. The objectionable legislation would soon be eliminated, but much more important, much of the constructive agricultural legislation of recent years likely would be thrown out in the house cleaning.

To operate successfully an agricultural price policy must permit substantial fluctuations in market prices. This is necessary to balance annual and seasonal changes in production and supplies, to offset changes in demand, and to prevent the accumulation of large surpluses. If the price of any farm product is maintained perennially at an artificially high level, its consumption will be restricted and its production increased. This will cause a large surplus to accumulate, and force the government to attempt severe restrictions on production.

To operate smoothly a price policy for agriculture must not require continual rigid production controls. Except in periods of temporary emergency, each farmer should be free to produce any crops, livestock or product which he thinks offers a reasonable chance for profit. Neither should the government try to direct agricultural production through frequent changes in price policies. Experience in both war and peace demonstrates that this is not practicable. Consumers efficiently guide production by buying things they want most. If any farm product sells at a consistently low price, it indicates that consumers want something else.

Finally, the national agricultural price policy should be recognized as only a part, but a very important part, of the national economic policy. The government has great influence over economic conditions through its control of fiscal and monetary affairs. The nation must recognize this fact, and manage the national debt and

the annual budgets to promote an adequate and relatively stable national income. If this is not done, no agricultural price policy can maintain an adequate and stable farm income.

The nation's future agricultural price policy should consist of three complementary parts: (1) An improved standard of fair prices (2) a variable system of price supports, and (3) a new soil improvement program.

The new standard of fair prices should be an improvement of the present parity formula. This formula has served fairly well, but is subject to criticisms as to the general level of parity and as to the relationship among the various parity prices.

Some persons argue that the level of parity is too high. They point out that the base period was an unusually profitable one for farmers, and that, except during wars and in the base period itself, farm prices have never been at parity for any substantial length of time. These facts may be granted; but they do not prove that the present formula gives a general level which is too high for the future. Two facts offer strong evidence that the present formula will give a reasonable general level for the next 10 or 20 years. First, for more than 150 years prices of agricultural products have been rising in relation to prices of all commodities. While the 1909-14 relationship was unusual for that time, it became normal about 1940. The second fact is that whenever, during the last 25 years, industry has approached full employment and production, prices of farm products have approached parity.

Other persons, including some farm and political leaders, argue that the present parity level is too low. Bills to raise parity prices have had strong support both in and out of Congress. A few conservative farm leaders have effectively opposed this legislation. The strongest argument for higher average parity prices is that farm wage rates, which have advanced very sharply, are not directly reflected in parity prices. This argument will be eliminated or reduced after the war.

Considering all the evidence there appears to be no impelling need for changing the general parity level, at least until after several years of postwar experience.

While the general parity level is satisfactory, adjustments of parity price relationships among commodities are badly needed. This has become increasingly apparent since the imposition of war-time price ceilings and price support programs based on parity

prices. All agricultural prices are inter-related. Corn and hog prices must be in proper relationship or trouble will develop. Corn and cattle prices, feed and milk prices, feed and egg prices, and the prices of various crops must also be in proper adjustment. These relationships gradually change with changes in production methods and costs. The use of large scale machinery reduces the cost of producing crops. Price relationships also change from variations in the relative demand for different commodities. Thus the demand for cotton was reduced when women quit wearing five or six petticoats and dresses requiring ten or a dozen yards of material.

A careful consideration of every possible base period from 1909 to 1944 is convincing that the years 1935-39 are the most satisfactory for establishing parity relationships among the various farm products. This period has several advantages. It bears approximately the same relationship to World War II that 1909-14 bears to World War I. The years 1935-39 are a base for numerous indexes. Prices in this period reflect most of the changes in production methods and costs, and the changes in demand for various farm products, which have occurred since 1910. The 1935-39 period already has considerable popular support.

The acid test of any proposed parity formula is its performance. A formula using 1935-39 price relationships, with an adjustment to maintain the 1909-14 general level, performs remarkably well. It raises parity prices for livestock and livestock products. It lowers parity prices of most crops. These adjustments are desirable since crop production has been mechanized and cheapened more than the production of livestock and livestock products.

The parity price for cotton would be lowered nearly 22 percent. This is a drastic cut, but a justified one. Cotton has been in increasingly serious trouble for more than 20 years. The once huge export market largely has been lost. The domestic demand has been greatly reduced, because of changing styles and habits and the competition of rayon and other synthetic fibers.

The postwar years will bring even greater competition from synthetic materials. Furthermore, the impending mechanization of cotton growing and harvesting, like the introduction of the cotton gin just 150 years ago, will make for much lower production costs and prices. If present cotton parity prices and government loan levels are continued, cotton production will be further over-expanded. The nation's taxpayers will be burdened with the cost of

vast surplus disposal and production control programs, and cotton growers will be subjected to severe restrictions.

The needed adjustment in parity prices should be made promptly. This will encourage many cotton growers on poor land to find employment in defense work or in the new industrial developments to follow the war. Others can turn to more diversified farming to produce food for the increasing population in cities. The earlier this adjustment is made, the easier it will be for cotton growers.

Under the proposed new formula, parity prices for rice and the small grains would be lowered from 12 to 28 percent to bring them more in line with actual values. The corn parity would be unchanged, but parities for hogs, beef cattle, lambs and wool would be from 7 to 23 percent higher, making for a better relationship between feed costs and livestock prices. Butterfat and milk parity prices would be 3 percent and 7 percent higher respectively. Chickens would be slightly higher and eggs slightly lower. The principal oilseed, fruit and vegetable parity prices would average somewhat lower. All these changes are economically justified.

The second part of the price policy for agriculture should be a price support program based primarily on variable commodity loans. Loan levels should be adjusted to reflect variations in demand and supply by relating loan levels to parity, and making an adjustment to reflect the supply situation.

For each of the major crops two supply figures should be determined—a "normal supply" and a "maximum supply." The normal supply would be the amount needed for domestic consumption, export and normal carryover. The maximum supply should be about 110 percent of the normal supply, and might vary for different crops. Both the new crop and the carryover should be considered in determining the supply.

When the supply of any major crop is normal or less, a loan of about 75 percent of the parity price should be available. For larger supplies the loan level should be lower, dropping to about 55 percent of parity when supplies reach the maximum. This principle is not entirely new in crop loan programs. It was included in the earlier corn loan legislation, although in that case no allowance was made for carryover.

This variable loan level will itself be some inducement to farmers to make needed crop acreage adjustments. Since loan levels will fall sharply with increases in supplies, over-production

will not be encouraged. At the same time lower loan levels and prices will encourage consumption and tend to prevent the accumulation of large surpluses. This loan program will keep government losses at a minimum, and will give producers substantial protection against unreasonable price declines.

The third part of the price policy for agriculture should be a soil improvement program closely associated with the crop loan program. All producers should be permitted, and those receiving crop loans should be required, to participate in this soil improvement program. Participation should involve a variable reduction in the acreage of crops involved in loans and a corresponding increase in the acreage of land used solely for soil improvement purposes. Some inducement, in addition to loans, should be offered for soil improvement. A large part, probably 50 percent or more, of the inducement should be reimbursements for expenditures for limestone, phosphate, potash, legume seed, and other soil improvement materials. In general, reimbursements should be made only for soil improving materials used on the land being used exclusively for soil improvement purposes.

The actual details of this program should be developed by each state. This would permit desirable adaptations to local conditions. The program should be worked out by or under the supervision of the best qualified agency in every state, the Extension Service. In order to maintain essential uniformity each state program should be subject to the approval of the United States Department of Agriculture.

The annual appropriations for the soil improvement program should be relatively small in most years. Appropriations should be increased substantially when farm prices and income fall and large numbers of farmers wish to participate in the crop loan and soil improvement programs. Detailed estimates of the actual cost have not been made, but preliminary studies indicate that it would be only one-third to two-thirds as much as for the agricultural programs of 1933 to 1940.

The agricultural price policy outlined here is not spectacular or novel. Neither is it presented as a cure-all for the problems of agriculture. It is both conservative and progressive. It is a policy built upon tried and tested principles. Unsatisfactory features of earlier policies have been eliminated. Substantial improvements have been made over the program provided for in present legisla-

tion. These improvements include modernization of the parity formula by the use of 1935-39 relationships among commodities with an adjustment to maintain the 1910-14 average; a graduated scale of commodity loan levels ranging from 75 to 55 percent of parity to reflect variations in the supplies; and the coupling of the loan program to a new and more positive soil improvement program.

This price policy for agriculture is politically sound; it can be adopted. It provides adequate protection to agriculture. It is relatively simple. It is in essence an improvement on already accepted policies. This price policy is economically sound; it will operate successfully. It will help to stabilize farm income. It will help to stabilize employment and national income. It will maintain relatively free markets. It will require a minimum of government regulation, and a minimum of money from the public treasury. It will maintain a maximum of individual freedom for each farmer. It will assure to consumers adequate supplies of food and other agricultural products at reasonable cost. It will protect vital soil resources. It will provide for increased production during periods of strong demand. In short, if adopted this price policy for agriculture not only will promote adequate and more stable income from farming, but it will also go a long way toward maintaining a high standard of living, the freedom of initiative and enterprise, and democratic government in America.



## WARTIME EXPERIENCE IN PRODUCTION ADJUSTMENT RESEARCH AND FUTURE POSSIBILITIES\*

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FOR 5 consecutive years the United States Department of Agriculture and the 48 States have cooperated in research designed to service wartime agricultural production. In the last 4 of these years, State Production Adjustment Committees have issued reports dealing with the possibilities and problems of agricultural production in each State. Each year there has been the objective of developing a basis for the next year's production program. In addition, supplemental analyses have been made that have varied from year to year. This article describes this very considerable endeavor, offers an appraisal of the service it has rendered during wartime, and with this background, considers the value similar work might have if continued in time of peace.

### *Early War Impacts, 1940-41*

Long before our entry into World War II, it became apparent that the conflict would significantly involve all sectors of the economy even should we remain a non-combatant Nation. State and Federal agricultural workers together with farmers would need to contribute to the building of workable agricultural programs. The task was large and exceedingly complex but through participation in the analysis of production problems and of ways and means of overcoming them, an understanding would be gained that would facilitate carrying out the programs developed. In the fall of 1940, 60 specialists from 9 agencies of the Department of Agriculture cooperated in the preparation of a mimeographed report called "Regional Adjustments to Meet War Impacts" which was widely circulated. It was made the basis of a one-day session at the National Outlook Conference, and contributed importantly to developing the early war food programs. The opening sentence briefly explained the purpose of this report, "The broad effects of war and the National defense program are extremely important to agriculture as a whole, and the specific

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effects of these impacts need to be considered in terms of farmers and groups of farmers in different regions who may have to make important changes in their farming systems."

With the passage of the lend-lease act and the announcement of our position as "the arsenal of Democracy," it became apparent that agriculture must gird for a battle of production of extended duration. The objectives underlying wartime production-adjustment research were several—to do our full share with a minimum of serious depletion of fertility reserves, and little if any irreparable damage to soil resources; to supply the growing demand for the essential products of agriculture quickly and efficiently with the least possible disruption of current systems of farming; to see that necessary production adjustments were, so far as practicable, in line with the long-time best interest of different sections of the country. These objectives have given continuity of purpose to the studies despite the changing nature of the work, year by year.

Cooperation between personnel in the U.S.D.A. and the Land-Grant Colleges and with State representatives of Federal agencies interested in agriculture was started informally early in 1941. The job was that of providing the factual basis needed for effective operation of the Nation's wartime food programs. The regional offices of the Division of Farm Management and Costs of the Bureau of Agricultural Economics assumed primary responsibility for uniformity in approach to the problem in 1941 and made available a series of regional reports.<sup>1</sup> These grew out of work with the States in which estimates were made of the "1943-45 expected" acreage of crops, numbers of livestock, and production, as contrasted with other estimates of the "long-time desirable" acreages numbers and production for the same broad areas where agricultural opportunities and problems were generally similar. The reports were chiefly devoted to outlining means of facilitating the adjustments that were needed immediately, and to suggesting measures anticipated to be necessary in the years 1943-45. A principal aim of the work in 1941 was to provide a basis for meeting the needs of the defense program in ways that would not conflict with the development of a stable agriculture.

The resulting reports, issued in June of 1941, were revised in the fall and used as a basis for State and county distribution of the Nation's first production goals for agriculture—the goals for 1942.

<sup>1</sup> Seven mimeographed reports under the general title, "Farm Adjustments to Meet Defense Needs."

*The Grass Roots Approach, 1942*

December 7, 1941, and our formal entry into the war, gave added impetus to the need for developing an all-out production program for agriculture, and the need for guidance stemming out of careful nation-wide research was intensified. It was decided therefore to improve on the techniques used in 1940 and 1941 by arranging for the fullest possible cooperation with research committees in each State—committees designed to utilize the services of production specialists in every field of agricultural endeavor and to bring their knowledge and experience into play in sizing up the adjustments that would be needed in each local area to permit it to make a maximum contribution to the war.

To obtain, in the limited time available, the suggestions of as many State people as possible for conducting this nation-wide project, a tentative procedural guide was developed in the U.S.D.A. and taken to the meeting of the American Farm Economic Association, in New York, December 27-30, 1941. After review by a large number of the State agricultural economists in attendance, a revised guide, "War Production Goals and Their Attainment," was prepared and distributed to those working on the project. State committees were provided with uniform assumptions regarding requirements for agricultural commodities in 1943, and what these might mean in terms of farm prices for agricultural products in each State. Statements were prepared on the prospective farm labor supply in 1943, and the prospective availability of production supplies such as farm machinery, feed, fertilizer, insecticides, and fungicides. The probable situations with respect to farm credit, transportation, marketing and processing facilities were also discussed.

With these working tools, State committees developed two types of estimates, (1) "1943 feasible" acres, numbers, and production for all commodities and (2) estimates of "potential" acres, numbers, and production for certain specified vital war commodities such as soybeans, peanuts, pork, and milk. Estimates of "1943 feasible" were for a balanced agricultural production considering competitive relationships between commodities at the assumed prices and with as many safeguards as possible under wartime conditions against unwarranted depletion of fertility reserves. Estimates of "potential" production, on the other hand, were an inquiry into the degree of expansion possible in different

areas for vital war products; to the exclusion of others if that became necessary. Three questions were posed. (1) What is the maximum limit of physical expansion of the commodity in each production area? (2) What enterprises would be displaced to permit this? (3) Under what conditions could this be brought about? The results of this phase of the work proved very useful in revealing areas that had additional production capacity for strategic products, and later aided in directing special efforts toward expansion into those areas where the greatest increases could be expected.

Genuine understanding of farmers' production possibilities and problems can be achieved only by a knowledge of how farms are organized and operated in different sections of the country, and how they differ in inherent productivity, in alternative opportunities, and in the degree of flexibility they have for meeting changing conditions. Much information of this type is currently available, both in the Land-Grant Colleges and in the Department; but in order to obtain information specially applicable for the 1942 study, the State Committees were encouraged to develop their estimates from a grass-roots foundation. This involved delineation of production-adjustment areas within a State—areas in which production problems and opportunities were essentially similar. Sample counties were then selected within the adjustment area for intensive study. In these counties members of the State committee met with small groups of farmers who were operating farms of similar types and sizes to discuss production problems for the year ahead. A typical farm, as currently organized and operated, was usually made the focal point of discussion. As the illustrative farm plan was developed both farmers and committee members could visualize the problems that would need to be surmounted to permit similar farms to make their maximum contribution to war needs in the new year. In many instances the discussions carried through to the point of determining the effect of proposed changes on income for the illustrative farm plan. This whole process of consultation and participation by farmers helped pave the way for later use of research findings in educational programs.

Information obtained from these discussions was later combined with other data, and interpreted in the light of the judgment and experience of members of the State committee and other workers. Estimates were then made of "1943 feasible" and "potential"

production first for sample counties, then by adjustment areas, and finally, by adding areas for the State as a whole.

Forty-eight State reports were prepared in 1942 based on detailed work in 327 adjustment areas. These reports gave special emphasis to discussion of attaining suggested production. Understanding of the problems ahead was in no small measure due to the direct contact with producers in the sample counties. The State reports were summarized nationally and made available to the Washington committees who were developing suggested agricultural goals for 1943, and a subsequent report afforded opportunity for administrative review of suggested goals prior to their revision and public announcement.<sup>2</sup> Thus the State reports not only aided in formulation of national goals but formed a reliable basis for their distribution among the States, and the work later proved useful in the process of distributing State goals to counties in many States.

#### *Agriculture's Maximum Wartime Capacity, 1943*

As war tightened its grip on the Nation, the various sectors of our production front began to compete more keenly for production resources. Labor was needed on farms, in factories, and in the military services. Nitrates were needed not only for fertilizer but also for gun powder, which had a prior claim. Steel was needed for countless items of war equipment, and manufacture of new farm machinery was severely limited. It seemed possible, however, that at some point in the war's progress food could become more important than additional planes, guns, and tanks—so much so that agriculture might have a higher priority than industry for use of more of the scarce resources, in order to increase food production.

If such conditions were realized and food continued to grow in importance what would be agriculture's maximum wartime production capacity—maximum in the sense of a balanced production of essential agricultural commodities, with each area making its largest possible contribution? Some areas would need to make drastic changes in farming systems, the only reservation being that against irreparable damage to the soil. Such was the nature

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<sup>2</sup> U.S.D.A. mimeographs, "Wartime Farm Production Adjustments, Parts I and II," Aug. 1942 and "Agricultural Production for 1943, Suggested State and Regional Distribution of Tentative Goals," Nov. 1942.

of the Nation-wide production adjustment research undertaken cooperatively during 1943—again with two types of estimates: (1) "Maximum Wartime Capacity," as outlined above, and (2) "1944 Wartime Capacity," designed primarily as background for the 1944 production goals program.

Statistical summaries of the State reports containing these estimates were mimeographed and made available to national goal committees in August and September of 1943.<sup>3</sup> By now this work had become a definite part of the goal-making process—a foundation of production analysis which could be combined with available information on food requirements to construct a program of production goals.

An unpublished analytical report, "Our Food Potential," was prepared from the work done in 1943. This analysis indicated the tremendous capacity of our agricultural plant—even when operating under wartime stringencies—and gave considerable insight into what could be done immediately, and within a relatively few years of all-out operation. To illustrate, during 1935-39, we were providing food for 130 million people measured in terms of 1943 average per capita diets. By 1943, wartime agricultural production had been so adjusted that an additional 40 million were being provided for. Assuming only normal rates of technological improvement but continuation of wartime conditions, the study indicated that it would be possible to provide for 200 million people within 2 years after 1943 and maintain the 1943 level of nutrition. This would have been accomplished mainly by producing more of the crops used for direct human consumption and less of feed grains and forage for livestock. By more rapid adoption of improved practices, by land development, prevention of food waste, and better utilization of food, the all-out potential within 2 years appeared to be food production for 220 million people. Within 10 years of the same type of intensive effort, 380 million people could be supplied with diets equivalent to those the average civilian was obtaining in 1943. The study outlined how these overall changes would affect the production of each agricultural commodity and indicated what would be needed in farm labor and production supplies to achieve these ends. Attention, also, was given to the commodity-value relationships that would be necessary to keep production in balance.

<sup>3</sup> U.S.D.A. mimeograph—"Agriculture's Maximum Wartime Production Capacity," (Statistical Supplement) Sept., 1943.



A byproduct of these studies conducted in 1943, were mimeographed reports on uses of farm land, yields of crops, and rates of feeding.<sup>4</sup> These were made available to members of State Production Adjustment Committees for review. Each committee could then compare its own estimates with those made in adjacent States and explore the reasons for the differences noted. These were intended to improve the statistical estimates of potential production and to provide a better basis for subsequent work.

*Setting up a Postwar Bench Mark, 1944*

The cooperative work undertaken in 1944 was again divided into two phases—estimates of 1945 wartime capacity and a postwar phase. The first was the year-to-year phase—designed to develop an analytical background for use in determining the 1945 production goals. Two mimeographed reports were issued summarizing the 48 State reports on this work.<sup>5</sup>

The second or postwar phase of the work in 1944 represented an attempt to visualize a desirable pattern for agricultural production after the transition from war to peace. This longer look ahead seemed appropriate because our agricultural plant has changed greatly from that of prewar days. In some regions wartime needs have accelerated desirable shifts, but in others the present pattern of agriculture if long continued would have serious repercussions. In addition to changed emphasis in crop and livestock production, technological advances in the broadest sense of the term—new machines, new varieties, additional fertilizer and divers kinds of improved practices—have, under the spur of wartime necessity, exerted a tremendous influence toward increasing agricultural production. Wartime habits of production once acquired are not easily laid aside; and consideration of their long-time implications should be of value in shaping agricultural programs for intervening years.

Any study primarily concerned with the distant future places the investigator on uncertain ground. This is particularly true if the end objective is that of *forecasting* what is likely to come to pass. In this instance, however, the aim was not to prophesy what

<sup>4</sup> U.S.D.A. mimeographs, "Farm Land—Acreage in Principal Uses by States"—Nov. 1943, "Crop Yields Per Acre by States"—Feb. 1944, and "Estimated Quantities of Feed Consumed by Livestock for the Year Beginning October 1, 1943"—Apr. 1944.

<sup>5</sup> U.S.D.A. mimeographs, "Production Adjustments in Agriculture, 1945," Sept. 1944 and, "Farm Land: Acreage in Principal Uses by States, 1945 Wartime Capacity," Sept. 1944.

farmers *will* do, but rather to obtain the best possible technical judgments of what *it would pay* them to do under assumed conditions of prosperity in agriculture.

With the objective of developing estimates that would serve as bench marks, or reference points, indicating the direction adjustments should take in intervening years, the States reported on a desirable pattern of balanced agricultural production within a setting of full employment, high industrial activity, a large volume of international trade, and a high level of national income—in short, prosperity conditions. No one set of assumptions regarding the future is likely to be realized in all respects and it would be desirable to develop estimates under several sets of possible alternatives. A second set of uniform assumptions involving a lower national income and considerable unemployment was made available for those States that wished to develop the work on alternative levels. About one-fourth of the States worked on more than a single set of estimates.

A preliminary analytical report together with a statistical supplement summarizing the 48 State reports on this postwar phase have been mimeographed for review and eventual public release.<sup>6</sup> Under the prosperity conditions assumed, this report indicates the postwar possibility of increasing gross farm production by one-third over the 1935–39 average, one-eighth more than in 1943, and one-twelfth above the record year of 1944.<sup>7</sup> This would be possible with relatively little change in the cropland base, with somewhat fewer and larger farms, and with farm employment nearly 10 percent below the 1935–39 average. Significant shifts would occur, however, in the use of cropland, and the bulk of the increased production would come from increased crop yields induced by more widespread use of the improved practices that it would be profitable to adopt.

New types of problems confronted those developing the bench mark estimates. Most of these occurred in evaluating the present importance of improved practices in production and their probable significance in the postwar period under consideration. They

<sup>6</sup> U.S.D.A. mimeographs, "Farming Adjustments After the War—Possibilities Under Prosperity Conditions," June 1945 and "Farming Adjustments After the War—Possibilities Under Prosperity Conditions, Statistical Supplement," May 1945.

<sup>7</sup> A new gross production index has been constructed which includes farm produced power as one of the components. See forthcoming U.S.D.A. publication, "Farm Production in War and Peace" by Glen T. Barton and M. R. Cooper.

involved adjusting the yield increases obtained on experimental plots from the use of a practice or a combination of practices to allow for the probable differences when used under farm conditions. They also involved estimating the current use of the practice or practices, and the probable degree of influence on the State average yield of a crop, assuming practices were adopted to the extent they would pay.

For many years research workers have been developing new methods which if adopted would result in more efficient farming. They are aware of the considerable lag between introduction of a practice and its widespread adoption. They know, perhaps, better than any other group, the vast difference between what farmers *will* do and what it would *pay* them to do under given conditions. Inertia is hard to overcome in any group, and sometimes the non-economic factors outweigh the economic incentives to change. When farmers' incomes are reasonably satisfactory and production presents no problems of especial difficulty, relatively few will exert extra effort to improve farming efficiency. In times of depression, however, when the margin between cash costs and selling prices narrows or disappears, there is greater urgency in discovering new ways of reducing production costs. These often take the form of scaling down out-of-pocket costs rather than the adoption of practices that would call for increased cash outlay. But in wartime when shortages of farm labor and supplies threaten to curtail production, farmers are more willing to increase cash inputs since satisfactory returns seem more assured. Perhaps a similar tendency would exist in any extended period of full employment and prosperity conditions.

In making the postwar bench mark estimates of acreage, numbers, and production, care was taken to keep the estimates on a *would pay* basis, ruling out the influence of the *probable* rate of adoption of practices, or what farmers *will do*. The bench mark estimates, however, have value only as they indicate what is profitable under the assumed conditions. As such they can serve as direction finders, or objectives toward which to work in intervening years.

Despite the difficulties that beset the path of anyone attempting a look into the distant future, the work has value in appraising our present position in relation to desirable future objectives. Improved studies of a similar nature will need repeating only at infrequent

intervals—but often enough to keep the long-time bench marks useful because they are in line with changing conditions. Desirable physical relationships may not change materially but changing economic conditions may make it desirable to accept other physical alternatives that may be available.

*Suggested Production for the Year Ahead, 1945*

Cooperative production-adjustment research has continued during 1945 but a somewhat different approach has been initiated. Uniformity in procedure has been held to the minimum necessary to national summarization of suggested levels of production for 1946 with State reports developed to have primary usefulness *within the State*. In addition, the States have suggested supplemental cooperative studies in the production-adjustments field that would have particular interest to the State or a group of States. During wartime, research guidance on the over-all problems of what to produce and where to produce it has been so necessary that funds and personnel of State and Federal agencies alike have been concentrating on supplying this need. Greater attention should be given to other types of production problems and particularly to those of State-wide and region-wide interest as soon as conditions permit.

*Wartime Accomplishments of Production-Adjustments Work*

*In Washington:*—The results of production-adjustment work can perhaps best be reviewed by examining how they are used both in Washington and in the various States. To appreciate how they are used in Washington, it is necessary to understand something of the goal-making process. Early in the spring of each year a Production Goals Review Committee is organized in the USDA. Its duty is to review tentative goals set up by subcommittees who have studied individual commodities or groups of commodities, and to recommend production goals for the ensuing year, together with the action needed to assure their achievement. Sixteen subcommittees with about eight to a dozen members each, comprise the commodity committees for 1946 goals. Membership on these working committees is confined to those within the Department of Agriculture who can contribute most to a study of production prospects and the needs for a given commodity or group of commodities for the year ahead. The representation among departmental agencies is widespread, including specialists in crop and livestock production, in production economics, in

agricultural statistics, in marketing, in storage, in agricultural supplies, in prices, in food requirements and allocations, as well as representatives of organizations that work continually with farmers in the field, such as the Agricultural Adjustment Agency and the Extension Service.

These commodity subcommittees meet frequently through the summer and fall, considering the needs for and the problems in producing the commodity or group of commodities for the new year. The following excerpts from a memorandum issued by the Goals Review Committee, "Development of the 1946 Production Goals—Suggestions to Commodity Committees" will indicate the important place given to production-adjustment (production capacity) research in goal development. This has been no less true in preceding war years:

"In developing the production goal report for 1946, the committee should give careful consideration to the following topics; and should include a short summary on each, along with the tables and tabular material:

- (1) Requirements
- (2) Production capacity
- (3) Suggested goal
- (4) Labor and production supplies
- (5) Marketing facilities
- (6) Prices (ceiling and support prices)
- (7) Recommendations for goal achievement

"The production capacity study is being carried on for the fifth year in cooperation with State agricultural colleges. Individual State reports giving suggested levels of production are due August 1 and a national summary of State reports by September 1. This report attempts to ascertain potential agricultural production in view of requirements and availability of production and marketing facilities, to determine the rapidity of use of the maximum productive capacity, and to furnish a basis for distributing production goals according to the best use of resources in each region."

Each year the States have forwarded to Washington a limited supply of the reports containing the results of their production-adjustment research. These have been placed conveniently in various agency offices and a circulating library has been maintained to further extend their usefulness. They have been widely consulted as a source of information about local areas and for details that it was not possible to make available in the national summaries of the cooperative work.<sup>8</sup>

<sup>8</sup> The printed annual report of the War Food Administrator, "Food Program for 1944" to James F. Byrnes, Director of the Office of War Mobilization, carried a major chapter entitled "United States Agricultural Production Capacity" which further recognized these Nation-wide studies.

Dramatic and unpredictable changes in the fortunes of war may cause significant month to month variations in prospective food requirements. This uncertainty introduces factors extremely difficult to work with, because demand is frequently out of line with the prospective supply that the Production Adjustment Committees have suggested for the new year based on earlier estimates of prospective requirements. In fact, the goals-making process is essentially that of reconciling prospective demand and supply, and out of these deliberations suggesting the best possible level of production. Nevertheless, a comparison of the officially announced national goals, commodity by commodity, with the recommendations made by State Production Adjustment Committees demonstrates a high degree of agreement.

Of equal importance with the definite quantitative suggestions made by State Committees regarding goal levels is the understanding gained of production problems being faced in important local areas. This has filtered into the goal-making and programming process in at least two ways; first by reference to the texts of the State reports and second by discussions in the commodity committee and review sessions with those who participated in production-adjustments work in the field. It has been the policy of the Bureau of Agricultural Economics to make one man available to work with the Production Adjustment Committee in each State, to facilitate the uniform approach that was needed if the work was to be summarized nationally. For the most part these men were supplied from the regional staffs of the Bureau of Agricultural Economics. The regional leaders of the Division of Farm Management and Costs, who followed this work closely as it progressed in the States, have come to Washington each year to participate in the national summarization of the State reports and in the review sessions.

The production-adjustment studies have made a good beginning in developing techniques through which administrators in Washington are kept aware of the problems of local production areas. They not only have focused attention on the areas with additional capacity for strategic products and on local hindrances to additional production; but they have been an important source of the guidance farmers needed in maintaining balanced production in local areas and on individual farms. Good administration of future agricultural programs—programs containing sufficient flexibility



to permit increasing efficiency in the use of our agricultural resources and general prosperity and stability for farmers—will be enhanced by studying these wartime procedures for features suitable for peacetime use.

*In the States:*—The most obvious use of the production-adjustment studies within the States during wartime has been that of affording opportunity to participate in developing the production level for each commodity, and once this is mutually agreed upon, the equitable breaking down of each State goal into county goals as a basis for work with farmers.

The possibilities in production-adjustment research were recognized in the Land-Grant Colleges as early as 1935 when they cooperated with the Program Planning Division of the Agricultural Adjustment Administration and the Bureau of Agricultural Economics in conducting a Nation-wide study focussing on the production problems of localized areas and regions. The science of agriculture has developed along specialized lines—courses being given in poultry husbandry, dairy husbandry, animal husbandry, farm crops, and horticulture. Research necessarily must be developed in specialized fields if fundamental results are to be achieved, but there is real need for synthesis of results and close attention to how these enterprises fit together on the farm.

The wartime need for dairy products, for example, has been great but this does not mean that every farmer will make his greatest contribution by introducing a dairy enterprise or expanding one already in operation. By considering the way in which farms are currently organized and operated in a particular area and the local variations in prices of farm products, in soils, in topography and climate, each farm enterprise is placed in proper perspective with relation to available alternative enterprises. A final step is that of reconciling the needs for dairy products from the area (the enterprise approach) with the way dairying fits into the organization of individual farms and working out means of encouraging adjustments that will permit each farm to make its largest contribution to vital war production. The 1935 study and the wartime production adjustment studies have had the advantage of concentrating the ability and experience of experiment station, extension, and other agricultural workers on the production problems of *farms in a particular area* rather than on a *particular enterprise*. As such they have been more productive in developing

patterns of agriculture that would permit each area to utilize its resources more fully in the interest of local and national welfare.

The wartime production-adjustment studies have stimulated additional interest in this approach, and a number of States are finding that experience gained in preparation of the State reports, as well as the report itself, furnish an excellent frame of reference for the State extension program for the year ahead. The generalized market outlook for hogs for the coming year is useful information but in addition, Bill Green farming in Boone County, Iowa, needs the prospective outlook for hogs interpreted in terms of the outlook for other alternative enterprises available in Boone County, and even better, in terms of farm set-ups of similar type, size, and physical condition to the one he is operating.

This approach was included in the cooperative production-adjustment studies conducted in the spring and summer of 1942 and is still continued in a number of States. Where funds and personnel have been available to develop this degree of localization, the value of the work as a basis of formulating State agricultural programs is readily apparent, and State workers are anxious to continue work along similar lines even after wartime needs are past. In a few States circumstances have confined the work to the minimum required to develop State figures for inclusion in the national summaries. In these cases estimates have necessarily been made for the State as a whole, with but little foundation of supporting analysis by adjustment areas or by groups of farms of similar type, size, and physical condition. The resulting product, while permitting completion of the national picture, has had but limited usefulness for work within the State.

In obtaining the judgments of State committees on production incentives and needed facilities, production-adjustment research has been less successful. While these needs were stressed, no uniform approach was developed for reporting on these phases. It has been difficult, therefore, to summarize effectively the reactions obtained, and to give them proper weight in developing action programs. Improvement of this phase should not be difficult.

#### *Usefulness of Production Adjustment Research After the War*

With 5 consecutive years of experience in wartime production-adjustment research, we should be in a position to determine whether any elements of this work have values sufficient to war-

rant their continuation in postwar years. Many of the time-consuming phases carried out during wartime, such as estimating potential production and maximum wartime production capacity, have served a useful purpose, but no reason exists for their repetition in the foreseeable future. Similarly, the postwar bench marks developed in 1944 and projected to the close of the transition period (assumed to be around 1950) will need repetition only when they no longer serve as useful indicators of desirable directions of change.

*Research Uses:*—As a continuing activity, greatest usefulness both nationally and in the States, would appear to be in brief but thorough research consideration of production problems and prospects for the year ahead—analyzing these, however, within a carefully worked out framework of desirable longer time objectives for the Nation, the State, the adjustment area and ultimately, the farm. Such work, on a continuing basis, would keep up to date the reconnaissance background for more detailed production-adjustment research. It would by no means represent all that should be done in this field in each State. Rather, as workers attempted to make sound appraisals of desirable adjustments for representative farming situations, area by area for the year ahead, the gaps in current information would be increasingly revealed, and cues would be furnished regarding the nature and extent of detailed research needed, and what revisions should be made in longer time adjustment objectives. These gaps would not all be in the economic field. They involve the whole field of input-output relationships and many would be in the physical sciences. For example, there is great need for more detailed knowledge locality by locality of the yields that can be expected from crops planted on specific soil types and handled under specific systems of cropping. Desirable adjustments on farms are fully as dependent on reliable information of this kind as they are on information regarding the market outlook for important commodities for the year ahead. The profitableness of different production alternatives are dependent on both these factors.

Where alternative opportunities are available both in the choice of farm enterprises and in methods of handling the land it is possible that untried systems of farming may in some instances prove more profitable than those now in common use. We might even look forward to establishment of a number of pilot farms

where drastic departures from current methods of organization and operation would be tested before recommending their general adoption. Such pilot farms should be complete units representative of physical conditions in the areas where they are located.

As we approach the postwar period there will be increasing need for indicating to the producer of cotton, wheat, and soybeans—to name but a few commodities—what the outlook is likely to be and what alternatives are open to him. In addition to illuminating the national situation this outlook must be brought definitely into focus with regard to the physical and economic conditions of his own area and his own farm. To illustrate, the Bureau of Agricultural Economics is cooperating with a number of States in a careful 2-year study of the postwar position of the oil-bearing crops, soybeans and flax. Results of this work should throw considerable light on the comparative advantage of soybean and flax production in different parts of the United States in competition with oil production in other countries that supplied so large a part of our prewar oil consumption. This background should aid in encouraging continued production of these crops only in those areas and on those farms where they are likely to be profitable in postwar years.

Problems of considerable magnitude will face the South after the war. Increasing competition from other cotton-producing areas, the growing popularity of synthetic fibers, mechanization of the cotton harvest—all are forces to be reckoned with. The impacts of these changes will vary markedly from area to area, making careful studies of the long-time alternatives to cotton production imperative. Drastic changes will be necessary in some localities to avoid disaster. But such changes can not be made overnight. They need to be clearly visualized as desirable longer-time objectives, year-to-year production planning being conducted within this framework.

Problems of similar magnitude confront those who would achieve stability of farming in the Great Plains where, in spite of variable weather, wheat is frequently produced in excess of normal domestic needs for human consumption. Can exports of wheat be profitably expanded, can an increasing portion of the crop be diverted to feed or industrial uses, or must systems of farming be developed that place less dependence on wheat as the main source of income? Here again are problems for longer-time research that need con-

sideration before we can be sure that year-to-year planning is moving in the right direction.

Important values accrue if all States continue a uniform approach so that the results can be summarized nationally, thus gradually perfecting our knowledge of the entire agricultural plant to the mutual benefit of individual States and of the Nation. This would provide the understanding needed in developing State and national agricultural programs with sufficient flexibility to permit each area to make the best use of its resources with consequent benefit to the farmers concerned.

During wartime it has been possible to gain a better picture than we have had previously of the principal uses of cropland. A number of gaps still need filling in—such as accounting more adequately for multiple uses of land, ascertaining more definitely the different kinds of pasture, differentiating between idle and fallow cropland, etc. We need to go on still further to a more adequate accounting for other land in farms and how it is used.

Along with this need for refinement in statistical data is that of keeping the entire job to an essential minimum so that the fund of data accumulated through the years reflects only that which is recognized both in the States and in Washington as necessary to an adequate understanding of the agricultural production problem. Consideration should be given to scheduling an annual production-adjustment appraisal so the best talent of the Land-Grant Colleges could participate in giving the work adequate attention within a limited period of time. Our returning military forces will probably tax college facilities during the regular school year. The work could probably best be done during the latter part of July and in August.<sup>9</sup> For those who would develop the State report and perhaps test the effect of desirable adjustments on incomes of representative groups of farms, 6 weeks or 2 months might be necessary. For most of the research and extension personnel who would participate, the input would be considerably less.

Several differences from procedures as followed in wartime would operate to keep lost motion to a minimum and permit the doing of more effective work. With the uncertainties of war and relief needs removed, it should be much easier to inventory the

<sup>9</sup> This ignores the need for earlier production guidance on fall-sown crops such as winter wheat and winter vegetables. Perhaps these are best handled as at present, with production adjustments committees giving brief but thorough consideration at an earlier date in the States where these crops are important.

stocks of food and fiber in the national storehouse, to appraise probable production of the current year, and to indicate with greater certainty the levels of production that appear necessary to meet probable demands for each product in the new year. This would be particularly true if these framework materials are developed *after* the July crop report is issued. The prospective availability of farm labor, machinery, and production supplies could also be indicated in advance with greater certainty in peacetime. Under these more definite assumptions regarding the national need for various agricultural products and the over-all conditions under which they may be produced, it should be possible to furnish within the State much more specific guidance than heretofore on the best uses of resources in each producing area and on farms of given sizes, types, and physical condition.

The work already done in each State has provided the historical background on trends in acreage of crops, numbers of livestock, and normal levels of production that are desirable for considering future adjustments. State Production Adjustment Committees are already so familiar with the job that it was thought unnecessary to prepare a procedural guide for the work being done this year. Dependence was placed on previous experience plus the use of the same kind of forms from State to State to provide the uniformity necessary for national summarization of results.

Some may feel that this approach could not properly be called research and that it falls more logically in the sphere of the extension economist. Others may feel that regardless of who would undertake the work, it is not sufficiently "profound" to be described as research. If the work were undertaken annually, however, as a piece of short-time research having first call upon the services of production specialists, and research and extension economists alike for a given period, and if the approach were of the intensity previously described for the work of 1942, it could serve the farming public and the Nation as a whole with an unusual degree of effectiveness.

*Extension and Other Uses:*—A major objective of production-adjustment research would be that of improving the foundation for an effective agricultural outlook program within the State. The task would be but half completed when professional agricultural workers have developed specific suggestions for the important farming situations. There would remain the further step



of organizing an extension approach that would bring the information before the specific groups of farmers whose farms and production were involved. This is important for it is out on the land that a major utilization of the results of research takes place. In their study, discussion, and formulation of plans for action farm people are, to a great extent, the architects of their own educational effort. A number of States have already made considerable progress in putting their wartime research results to work, and this story can be told most effectively by those who have had this experience. If research results have been formulated for farms that are representative of important types, sizes, and physical conditions, it follows that extension meetings should be so organized that the farmers directly concerned are called together.<sup>10</sup> In fact, as indicated earlier, some States invite such farmers to participate in *developing* the research results, thus combining research and extension effectively.

Members of the State Production Adjustment Committee who participated in the study could assist in discussing the results with farmers to the advantage of both. The exchange of views between the producer and the researcher should result in a more generally useful, more realistic research product.

The desirability of carrying out the research aspects of production-adjustments work within a framework of longer-time objectives has been stressed. Some such framework is equally necessary as background for extension work growing out of the research. Some progress was made during 1944 in developing long-time objectives and in appraising our present position with respect to them. The results of this work are proving very helpful in formulating national outlook information. Similarly, the formulation of longer-time objectives for local areas will greatly aid in opening up many new opportunities for effective outlook work on a local area basis.

The July-August timing of the research phase would keep it sufficiently up-to-date to make it applicable at the time of the outlook meetings. When the State reports have been summarized nationally the tentative story of desirable production adjustments for the year ahead is available. This can then be compared with the prospective market outlets and wherever wide discrepancies are noted, consideration can be given to variations from the previous levels of pro-

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<sup>10</sup> For this approach described in more detail and applied to farm planning see the author's article in this JOURNAL, 23 (4): 826-830, 1941.

duction suggested in each State report. Departures from these estimates can then be discussed that would bring probable supply and probable demand more nearly into equilibrium, at the same time drawing most of the product from the areas that can produce it most efficiently. State and Federal workers could develop these suggestions jointly at the National Outlook Conference.

Within the State these revised suggested levels of production would later be appraised in two ways; first, in the light of the revised market outlook for the new year and second, in the light of desirable long-time objectives. State reports would then be revised, if necessary, to prepare them for effective outlook work in localized areas throughout the State.

Many types of outlook information on markets and prices are already available. An important supplement to these can be supplied by improving and expanding our local and national knowledge of production possibilities and making it available in usable form. A well rounded outlook program should result.

The research aspects of future work in the production-adjustment field have been continually emphasized in this discussion. State and Federal research personnel drawn from many subject matter fields would necessarily take the lead in providing the factual basis both for short-time and longer-time phases of the work. During the war State Production Adjustment Committees have included liberal representation from extension and operating agencies. In some instances these individuals have served as chairmen of the State Committees and in many others they have made effective research contributions as well as serving in a review capacity.

To insure effective use of the results of production-adjustment research it is highly desirable that those responsible for extension and operating programs participate in the development and review of the work.

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This article is not intended as a plea for the unaltered continuation of a procedure built up to meet wartime needs. It is intended rather as a start in exploring, jointly with cooperating agencies, the possibilities in one phase of the general field of production-adjustment research as a continuing process, and the ways in which State and Federal research groups can join forces to come out with the largest socially useful product.

## DISCUSSION

G. A. POND  
*University of Minnesota*

Mr. Johnson has presented an excellent summary of the experiences in production adjustment research of the past four years. His appraisal of future possibilities also represents a valuable contribution. The reviewer will confine his remarks to elaborating the discussion as it applies to individual states, particularly with reference to the desirability of production adjustment research as a permanent project.

Agriculture is a highly dynamic industry and adjustment in production must be a continuing process in peace time as well as in time of war. Internal and external factors are constantly changing. Annual state and federal outlook reports for more than twenty years indicate that this fact has been generally recognized.

Outlook work prior to World War I was largely the function of economic workers and often confined to those in the extension field. The Regional Planning Project of 1935 was the first general recognition of the importance of broadening the scope of planned farm production. With the increasing volume of agricultural research has come increased specialization among workers. No one individual or class of workers can be sufficiently familiar with all lines of agricultural technic and with economic facts and methods of analysis to handle the problem alone. On the other hand it becomes increasingly important with this growing specialization among workers that each group see their field in its relationship to the broad problems of farming as a business and agriculture as an industry. Only in this way can our agricultural research program be most effectively directed toward the solution of the problems of adjustment that constantly confront farmers. The economist must keep abreast of developments in agricultural technic and the subject matter worker must recognize the relationship of his specialized field to the broad objective of a stable prosperous agriculture.

The production adjustment programs have developed a technic that may well be continued in permanent adjustment or outlook research projects within the states or preferably as a cooperative undertaking between the several states and the United States Department of Agriculture. Not only has the general plan of approach been developed but a larger amount of statistical background information has already been tabulated. Each year current production data can be added and the tabulations kept up to date with relatively little effort. Such projects should serve greatly to increase the scope and value of outlook information available to the farmer.

The more general over-all planning such as was involved in the 1935 Regional Planning Project or in setting up the Post War Bench Mark of 1944, as Mr. Johnson points out, does not need repeating each year. It should, however, be repeated at intervals of perhaps 5 to 10 years. These studies serve a valuable purpose in orienting research. They call attention to gaps in available information and suggest new lines of needed research and new methods of interpretation.

Mr. Johnson very properly stresses the fact that state data must in many cases be broken down by smaller areas in order to deal more effectively with local situations and alternative production opportunities. This suggests the necessity for more emphasis on type-of-farming area delineations and of keeping these adjusted to shifts in production within the state. Both subject matter and economic research may well be planned more definitely in terms of specific production areas and their peculiar problems.

Production adjustment planning has served a useful purpose in calling attention to deficiencies in the factual information needed for effective planning. Considerable information is already available as to the acreage and production of the principal crops and the numbers and production of the different classes of livestock. Mr. Johnson calls attention to the lack of data covering such things as multiple use of land, acreages of different kinds of pasture, amounts of idle or fallow crop land, and the utilization of "other land in farms." In addition a more detailed breakdown of state information by counties is needed. More information is also needed regarding shipments of feeder livestock and feed between states and between areas within states. With the need for this additional data well established it should be much easier to interest the federal and state crop and livestock reporting services in setting up the machinery to secure it.

The production adjustment research of the past four years would have been well worth while from the standpoint of the individual states even though the results had not been used in planning national production goals. It has served to develop an improved basis and procedure for state outlook work. It has served more effectively to coordinate agricultural research work in the states and especially to develop more cooperation and mutual understanding among research workers in the subject matter and economic fields. It has brought to light some of the deficiencies in the agricultural information needed in planning agricultural production on an area and state basis. To continue it in the future with such modifications as experience may dictate seems highly desirable. It is one war product that can be converted to peace time service with little adjustment or alteration.

## DISCUSSION

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This article gives in compact form a description of the Production Adjustment study carried on cooperatively by the BAE and the land-grant colleges. It is well done and deserves to be reproduced and made available to all who may be interested. Many of the federal and state personnel who have worked on the project at one time or another, but have not been in continuous touch with it, will appreciate this initial statement of objectives and historical background. Others who may contribute to the project in the future and young workers entering the field of agricultural service will want to review this article to obtain a perspective of the work that

has been done to view our total agricultural production from the standpoint of both the wartime maximum and the potential continuing production for future needs.

Further comments on the historical outline of the project to date is unnecessary except that the idea of viewing our agricultural production plant as the basis for adjustments was conceived in peacetime and the Regional Research Project carried out in 1935 was the forerunner of the Wartime Production Capacity or Adjustment Studies. The 1935 project is recognized in this article under the "Wartime Accomplishments of Production Adjustment Work—In The States," but is not mentioned as a part of the historical development of the project.

The article establishes four major points: (1) The scope of the project is wide, covering all types of agricultural production in the 48 states. (2) The reports of the project contributed materially toward the establishment and guidance of wartime production programs. (3) The project will be of value in the future to farmers as they develop or revise plans for their farms. Specialists and agency representatives who contribute to or who are otherwise familiar with the reports of this project are better able to assist farmers develop plans of organization and operation. (4) The results of the work are proving valuable in formulating national outlook information and in turn may be of considerable assistance in the application of outlook material to local areas.

The "Extension and Other Uses" is a brief section worthy of attention because it deals with the direct use of the results from the project. The indirect benefits, such as developing an overall picture of agricultural production for research, extension, and agency representatives, and providing a basis for establishing goals, have been greater than the direct use of the material with individuals and groups of farmers.

It is stated that there is little need to repeat such items as the potential production, maximum wartime capacity, and postwar benchmark. Probably not, because these parts of the program were developed for particular situations. However, considerable basic information was assembled and used which should be revised and brought up-to-date. Some of the most important items of basic information are:

1. The classification of soils according to their inherent productivity and erosion hazards and recommended land use.
2. The total amounts of basic fertilizing materials (limestone, rock phosphate, and potassium) needed by soil types and by counties; the total amounts of special or mixed fertilizers needed on the various yearly soil types for recommended cropping systems.
3. The extent of need for each erosion control practice.
4. Amounts of feed used per unit of livestock production in different areas of the state and under different types of production.
5. Grain shipments for commercial uses.

Some of the reports on the special studies, particularly the postwar benchmark, gave evidence of difference in interpretation of the assumptions and in the application of basic information. While conditions may vary by areas and the same type of information is not readily available in all states



a common understanding of assumptions and methods of applying research information to total production would help secure more comparable results.

The project in Illinois has served the purposes for which it was developed. A high degree of cooperating exists among the departments of the College and the agencies of the USDA within the state, and while a few persons must necessarily be responsible for the details, many have contributed information, recommendations, and judgment necessary for a completed report. Those who contributed directly have a better understanding of the total production problem which will directly or indirectly influence the work they do in either research or extension. The reports of the adjustment study have been used directly in the establishment of production goals, first in Washington, when the preliminary state goals are determined and then when the preliminary goals are reviewed and approved or adjusted by the state group. The state goals are then broken down into county goals. These county goals are given wide publicity, and farmers use them as general guides as they make their production plans for the year ahead, although there is a gap between the county goals and the farm, which the farmer must bridge as best he can.

Since actual production takes place on farms it is only logical that eventually the goal procedure will be refined and extended to determine goals for individual farms. During this process, however, goals may lose their original purpose—to serve as guides—and become requirements which would be most unfortunate because it would tend to relieve the farmer of making his own determinations for goals and production plans. Farmers, then, must necessarily have a prominent part in bridging the gap between county goals and farm goals.

The suggested uses of the project for research point toward the farm as the place where action takes place and all agricultural information becomes effective. The objective of the study is for the farmer to evaluate all production and economic information and make adjustments before rather than after a need is evident. That is a big order but it is in the right direction to be most useful to farmers individually and to the nation.

The element of time enters into making adjustments and may need some special attention as a part of a research program. How long does it take to make an adjustment? How much time elapses from the conception of an idea until it begins to pay dividends? For example: If a person decides to grow more and better legumes he determines where it is to be grown, tests the soil, applies the limestone and other fertilizers needed, sows the seed, waits a year and more to harvest the crop by pasturing or by cutting and storing, feeds it to livestock and finally markets the livestock. If the legume is to be used solely for soil improvement, another period of time will elapse until the following crop is marketed as grain or through livestock. Considerable time has passed and, the companion item, costs have accumulated. If the person decides upon two major adjustments such as growing more and better legumes and establishing a beef cow herd, he has not only the lapsed time to consider but the timing of both with each other and with the other operations and enterprises.



Pilot farms are mentioned as a possible means of testing drastic departures from current methods of organization and operation. Wide difference of opinion exists as to the effectiveness of such farms in testing the economic significance of anything because economic conditions cannot be simulated. However, the idea should be reviewed carefully to determine if it can contribute in giving direction to some changes in methods of production.

The Extension uses to date have been more indirect than direct. Only minor attempts have been made to take the results of the study direct to the farmers, but by entering into the formulation of the goals and by forming a background they do contribute materially to extension programs, both for the state and the counties.

## MECHANIZATION OF THE COTTON HARVEST

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**L**ESS progress has perhaps been made in the application of machine labor saving devices to the production and harvesting of cotton than to any other major crop in American agriculture. Prior to World War I, about the same amount of labor was required to produce a pound of cotton as in 1860. Since then, some progress has been made in utilizing power equipment and improved machinery in seedbed preparation and in the cultivation of cotton, which has reduced somewhat the total man hour labor requirements for cotton production. The fact, however, that a large amount of hand labor is still required to harvest the crop and the presence of a reasonably adequate supply of unskilled cheap hand labor has hampered progress in the application of improved tools and techniques in the planting and cultivation of cotton. Consequently, much of the cotton crop is still produced with hand labor, which accounts in large measure for the low output per worker in cotton production.

### *Cotton Production Inefficiencies and Exchange Penalties*

The income status of the vast army of cotton field workers is thus adversely affected by the fact that the product of their toil is exchanged in the market place with goods much of which have been produced by skilled workers using tools that have multiplied their efficiency many fold. A man cultivating with a hoe or working with his bare hands in the harvesting of cotton is not a competitive equal in terms of earning power with a man working with a tractor or other farm power equipment.

The cotton field worker's income has been further adversely affected by the fact that the product of his toil has been sold at a price determined in a competitive world market, whereas, most of his purchases have been in a sheltered tariff protected market or at prices not otherwise fully competitive. Credit has been scarce and interest rates high for a great many years.

Thus production inefficiencies, the sale of cotton in an erratic and unstable world market, exchange penalties, and high credit costs, explain in large measure why the cotton producers of the South receive the lowest real as well as monetary income of any group of workers in America. The amelioration of some of these problems is

within the reach of the cotton producers themselves; whereas, other important causal factors can be dealt with only from a national or international level.

### *Cotton Outlook Unfavorable*

The current outlook for cotton is such that apparently something definite and tangible will have to be done in the postwar period even to safeguard the present unsatisfactory economic position of the cotton producer. The ever increasing competition of producers in other countries and the phenomenal increase in synthetic and substitute products for cotton in both the domestic and foreign markets will no doubt complicate the cotton situation immeasurably.

TABLE 1. ESTIMATED GRADE AND MANUFACTURING WASTE OF COTTON

Grade	Percentage waste
Good middling	6.3
Strict middling	7.2
Middling	8.0
Strict low middling	9.2
Low middling	11.8
Strict good ordinary	14.0
Good ordinary	16.5

Source: "Cotton Fiber and Spinning Testing Service," War Food Administration, United States Department of Agriculture, September 1944, p. 10.

The steady development of the quality and adaptability of rayon staple fiber together with a decline in price has put this fiber in a position to compete with cotton not only in the finished goods market but in the cotton mills as well. The mill operator has a choice of using rayon staple fiber in place of or in combination with cotton. In the future the price and quality of these competing fibers will be the major factors determining the product or combination of products that will be used.

It is predicted that the price of rayon will be still further reduced following the war. Due to losses of fiber in the processing and utilization of cotton, it must sell for approximately one-tenth less than rayon in order to be on a competitive price basis with rayon. See table 1.

### *Reduced Production Cost Needed*

Considering the low economic status of cotton producers generally, a possible reduction in the relative price of cotton means that it will have to be produced more cheaply, and that as a matter of

equity and economic necessity the exchange penalties previously mentioned will have to be removed. Reduced cost of production can be effected through the usage of better tools, more efficient practices, and the production of better quality cotton. The improvement of the exchange status of the cotton producer can be accomplished through appropriate public policy and programs.

This first report is concerned primarily with the progress and possibilities of reducing the cost of producing cotton through mechanization of the cotton harvest.<sup>1</sup> If the slow and tedious method of hand picking cotton can be eliminated, the major obstacle to complete mechanization of cotton production will have been largely eliminated.

#### *Cotton Harvest Labor Requirements*

The amount of hand labor required to harvest an acre of cotton varies with the yield, stand, prevalence of weeds, variety of cotton, and physical characteristics of the soil on which cotton is grown. For the country as a whole, approximately 57 percent of the unweighted man-hour labor requirements for the production of an acre of cotton is required for harvesting. In the Mississippi Delta Area, from 60 to 65 percent of total labor is required for harvesting, depending on the degree of mechanization; and for the irrigated areas of the West, 67 percent of total labor is for harvesting. It is thus obvious that the perfection and general use of a mechanical cotton harvesting machine will make possible a drastic reduction in the man labor required for the production of an acre of cotton. See table 2.

#### *Low Farm Machinery Ratio*

The amount of machinery on Southern cotton farms is considerably less than that found in other farming areas of the country. Comparisons are indicated in table 3. Even though farm machinery value ratios to crop acreage and to farms are slightly higher for the Delta plantation areas than for nonplantation areas of the Cotton Belt in the Southeast, the resultant labor efficiency within the plantation area has been largely with crops other than cotton.

Increased use of power and machinery in seedbed preparation and in cultivation have resulted in somewhat higher cotton yields per acre and more efficient utilization of land and labor in these proc-

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<sup>1</sup> A subsequent report will deal with mechanization and other labor saving practices as they relate to the planting and cultivation of cotton.

TABLE 2. APPROXIMATE MAN-HOUR LABOR REQUIREMENTS PER ACRE FOR SELECTED CROPS<sup>1</sup>

Selected crops	Man-hour labor requirements per acre
Alfalfa	20.0
All hay	4.7
Barley	9.6
Beans, snap	131.0
Corn	27.3
Cowpeas	19.0
Cabbage	109.0
COTTON <sup>2</sup>	133.0
Irish potatoes	68.0
Lespedeza	8.9
Oats	9.0
Peanuts	63.0
Soybeans	16.0
Sweet sorghum	14.0
Sweetpotatoes	114.0
Sorgo syrup	130.0
Tomatoes	114.0
Watermelons	59.0

<sup>1</sup> Adapted from *Labor Requirements for Crops and Livestock*, M. R. Cooper, W. C. Holley, H. W. Hawthorne, and R. S. Washburn, Bureau of Agricultural Economics publication, F. M. 40, 1943.

<sup>2</sup> Man-hour labor requirements taken from Mississippi Agricultural Experiment Station Bulletin 387, "Farm Labor Requirements in Mississippi," Paul S. McComas and Frank J. Welch, 1943.

esses. So long, however, as labor must be kept on the plantation for hoeing and picking regardless of labor efficiencies in the other production processes, neither labor nor management can take full

TABLE 3. FARM MACHINERY VALUE RATIOS FOR SELECTED AREAS, 1940

Item	Value farm machinery per capita	Value farm machinery per crop acre	Value farm machinery per farm
Mississippi Delta <sup>1</sup>	\$ 47.55	\$ 7.68	\$211.00
Mississippi	28.97	5.80	138.00
Southern States <sup>2</sup>	28.92	5.65	163.00
Midwestern States <sup>3</sup>	179.81	11.05	795.00
United States <sup>4</sup>	129.66	10.12	614.00

Source: United States Census.

<sup>1</sup> Includes following counties: Bolivar, Coahoma, Humphreys, Issaquena, Le-flore, Quitman, Sharkey, Sunflower, Tunica, and Washington.

<sup>2</sup> Includes Alabama, Arkansas, Georgia, Louisiana, Mississippi, North Carolina, and South Carolina.

<sup>3</sup> Includes Indiana, Illinois, Iowa, Ohio, Wisconsin, and Kansas.

<sup>4</sup> Exclusive of 7 Southern states indicated above.

advantage of such efficiencies. They merely tend to aggravate the already rather acute underemployment problems.<sup>2</sup>

The successful harvesting of cotton with machinery will give added impetus to mechanization and improved practices for the total production process. Such an adjustment will certainly increase very significantly the per unit labor output on cotton farms, reduce unit cost, and should, at least in the short run, tend toward an increase in cotton farm labor income.

The only remaining serious bottleneck with reference to hand labor requirements will be that of chopping and weeding the cotton. Less progress has perhaps been made to date in eliminating hand labor in thinning the cotton to a stand and eliminating the grass, weeds, and vines that cultivators will not get than in any other phase of the production process. This is the next big problem in the way of complete mechanization. In experiments conducted at the Delta Branch Experiment Station, the flame cultivator has shown more promise as a possibility for filling this gap than anything yet tried.

### *Cotton Harvesting Machinery*

Despite the many attempts that have been made to develop a satisfactory mechanical cotton harvesting machine, most of the cotton produced today throughout the world is still harvested by the time-wasting, back-breaking methods used thousands of years ago when the Pharaohs reigned in the valley of the Nile. There has been no lack of persistent effort through the years to develop a mechanical cotton picking machine. The disappointing results of such persistent effort attest to the many difficulties associated with the problem. As early as 1850, S. S. Rembert and J. Prescott of Memphis, Tennessee, were issued a patent on a mechanical cotton picking machine. Since that time, hundreds of patents covering many kinds of mechanical cotton harvesting devices have been issued.<sup>3</sup>

Even though a very wide range of devices has been used experimentally in an effort to find a satisfactory cotton harvesting machine, most of the efforts can be grouped into five classes as

<sup>2</sup> Welch, Frank J., *The Plantation Land Tenure System in Mississippi*, Mississippi Agricultural Experiment Station Bulletin Number 385, pp. 22-23, June, 1943.

<sup>3</sup> Smith, H. P., Killough, D. T., Byrom, M. H., Scoates, D., and Jones, D. L., *The Mechanical Harvesting of Cotton*, Texas Agricultural Experiment Station Bulletin Number 452, August, 1932.



follows: (1) picker type, designed to pick the cotton from the open bolls by means of spindles, fingers, or prongs, (2) thresher type, which severs the stalk and takes the entire plant into the machine where the cotton and vegetative matter are separated, (3) pneumatic type, which attempts to remove the cotton from the bolls either by suction or blasts of air, (4) the electric type, designed to attract the cotton fiber to a statically charged belt to remove the cotton from the boll, and (5) the stripper type, designed to remove the cotton bolls by combing the plant with teeth or by drawing it between stationary slots or revolving rolls.

Considerable progress has been made in the development of the picker type and stripper type machines during the past decade. The stripper machine is better adapted to the sub-humid regions of Texas and Oklahoma; the picker type machine is being used in the Mississippi Delta and other relatively level producing areas where the plant growth is relatively rank and the yield high.

Since the operational analysis for this report is for Mississippi, and since the stripper has been used only to a very limited extent and largely on an experimental basis in this State, only the picker type machine will be included in this report. Two general type pickers employing combinations of spindles and doffers have been developed. These two types are known as high-drum pickers and low-drum pickers. The former operate successfully in cotton growing up to 5 feet; whereas, the latter are used where the cotton stalk is  $2\frac{1}{2}$  feet or less in height. The low-drum machine is not adapted to Mississippi Delta conditions where the cotton plant usually grows rank.

No doubt, considerable progress will yet be made in improvement of the present cotton picking machines and the present retail price can probably be reduced when the machines are produced on assembly-line basis. Sufficient progress has been made to date, however, to demonstrate the feasibility of the mechanical harvester both from the operational and cost viewpoints, at least under current conditions of relatively high wages and scarce labor supplies.

#### *Mechanical Operation, 1944*

Detailed operational records were kept on the mechanical pickers that were used on a practical farm basis in 1944. There was a total of 12 of these machines. Records were also kept on the

operation of two additional experimental machines, which data were used largely as a check against actual field data.

In addition to machine operation records, information was collected on the effect of machine-picked cotton on grade and the amount of cotton left in the fields by the pickers. On all of the plantations using mechanical pickers, cotton was also picked by hand. The comparative grades and prices of machine-picked cotton and hand-picked cotton were compiled for each day of harvest throughout the season in such a way as to make daily comparisons from the same plantations as well as a seasonal comparison.

Figures were also compiled by actual boll count on one plantation and by estimates on all plantations on the amount of cotton left in the field by machines. The effect on income of grade reduction and loss of cotton in the field will be indicated later.

#### *Cost of Machine Operation, 1944*

A total of 2,229 bales of cotton was picked during the 1944 season by the 12 machines studied, or a seasonal average of 186 bales per machine. The number of days which a machine can operate during a season, the topography of cotton fields, length, of cotton rows, prevalence of weeds, and variety of cotton, are factors that influence the amount of cotton that can be picked in a day or during the season. A single machine will cover from 4 to 8 acres per day, which means, on the average for Delta conditions, from 4 to 10 bales of cotton per day can be harvested per machine.<sup>4</sup> During the 1944 season the 12 machines for which records are available operated an average of 430 hours, or 43 ten hour days. The machines actually picked an average of 4.3 bales for each ten-hour day they were in operation.<sup>5</sup>

The average cost, not including grade loss or value of cotton left in the field, for mechanically picking a bale of cotton in 1944 was \$7.38. This cost was divided as follows: direct operating cost, \$3.84; depreciation, and interest cost, \$3.54. See table 4 for detailed cost items.

<sup>4</sup> See Mechanization of Delta Cotton Plantation, by H. H. Hopson, Jr., Hopson Planting Company, Clarksdale, Mississippi.

<sup>5</sup> Detailed information as to the actual acres covered by the machines is available for only one plantation. This machine operated during a part or all of 49 days and averaged operating 9.8 hours per day, a part of which was at night. A total of 228 acres was covered and 202 bales were picked. An average of 4.1 bales of cotton was picked from 4.7 acres each day the picker operated.

Some of these cost figures should be regarded as tentative, especially those for maintenance and repairs. The manufacturers are still experimenting with the machine, consequently, some replacement parts and some repairs made by the Company were not included in the cost items. Only normal repair and upkeep charges, as nearly as these could be judged to be normal, were included in the cost items. Also, depreciation charges are rough

TABLE 4. COST OF OPERATING 12 COTTON PICKERS IN THE MISSISSIPPI DELTA DURING THE 1944 HARVESTING SEASON<sup>1</sup>

Item	Total cost	Average per picker	Average per bale for 2,229 bales
Direct operating costs:			
Fuel	\$ 1,096.79	\$ 91.40	\$ .492
Oil (motor and picker)	366.72	30.56	.165
Labor	3,801.13	316.76	1.705
Repairs (tractor and picker)	2,069.53	172.46	.928
Miscellaneous	1,230.69	102.56	.552
Total	\$ 8,564.86	\$ 713.74	\$3.842
Depreciation and interest:			
Depreciation (tractor)	750.00	62.50	.336
Depreciation (pickers)	6,417.89	534.82	2.879
Interest (tractors)	75.00	6.25	.034
Interest (pickers)	641.78	53.48	.288
Total	\$ 7,884.67	\$ 657.05	\$3.537
Total cost	\$16,449.53	\$1,370.79	\$7.38

<sup>1</sup> Machine operators were paid an average of 38.5 cents per hour.

estimates due to lack of actual experience with reference to length of life of the machines. Pickers were depreciated at the rate of 20 percent per annum "straight line" and tractors at the same rate but for only one-fourth the time since tractors are normally used for other farm work the other three-fourths of the year.

Major adjustments for tractors are necessary when pickers are attached. The average cost for parts at the time of conversion was \$100, which amount was added to the cost of pickers. Installation labor cost was approximately \$50 and this was included with the miscellaneous items, which also included some other minor costs such as service costs for trailers used in servicing machines in the field and a few other very minor miscellaneous items.

The average cost of the pickers delivered to the plantations was

\$3,924, including \$1,250 for the tractors on which the pickers were mounted. Thus the average cost of the pickers including conversion kit was \$2,674. The interest rate on investment was calculated at 4 percent per annum on one-half the value of the pickers and one-half of the proportion of the tractor investment charged to the picking operation.

#### *Grade Loss*

Despite the excellent progress that has been made and continues to be made, both with respect to the operation of the picker and for cleaning equipment on gins, cotton picked with mechanical harvesters is given a lower grade and thus sells in the market place at a discount over that of hand-picked cotton.

The machine-picked cotton averaged 1.4 grades lower than cotton picked by hand on the same plantation on the same days for the 1944 season. The average grade for 3,506 bales of hand-picked cotton was slightly above strict low middling; whereas, the average grade for 2,229 bales of machine-picked cotton was slightly below low middling, or a difference of 1.4 grades. The range of grade differences ran from 0.8 grade on one plantation to 2.2 grades on another plantation. There was a difference of 0.2 of one staple length in favor of machine-picked cotton, which may or may not be a significant difference in fiber length. The Delta Branch Experiment Station at Stoneville reports a comparable difference from unpublished data gathered in 1944.<sup>6</sup>

The average price for the grade of hand-picked cotton for the period September 1, 1944, through January 31, 1945, on the Memphis market was 21.73 cents per pound; whereas, the average price of the grade of machine-picked cotton in the same market during the same period of time was 18.05 cents per pound. The difference is equal to 3.68 cents per pound or an average of \$18.40 per bale in favor of the hand-picked cotton. See table 5.

#### *Spinning Quality*

The Department of Agriculture, War Food Administration, Cotton and Fiber Branch, Stoneville, Mississippi, in preliminary tests have found that machine-picked cotton is slightly superior (stronger yarn) to that of hand-picked cotton. This was probably due to the fact that the shorter, weaker staple that constitutes the

<sup>6</sup> See also Mississippi Agricultural Experiment Station Service Sheet Number 364, P. W. Gull, July, 1943.

TABLE 5. COMPARISON OF GRADES AND STAPLE LENGTHS OF MACHINE AND HAND-PICKED COTTON, MISSISSIPPI DELTA, 1944

Item	Grade <sup>1</sup>	Staple length	Average price (cents)	Value per bale
Machine-picked	7.15	34.1	18.05	\$ 90.25
Hand-picked	5.75	33.9	21.73	108.65
Difference	1.4	.2	3.68	\$ 18.40

<sup>1</sup> This grade index was figured by assigning values of 1 to 9 to the grades of cotton in order from middling fair to good ordinary and then averaging these values for machine- and hand-picked cotton.

more undesirable cotton is left in the field under machine-picked conditions; and when the market comes to recognize this factor, the income loss as a result of excess grade penalty will be less than it is at the present time.

#### *Defoliation*

Most of the machine-picked cotton had been defoliated by spraying the stalks with calcium cyanide dust. This cost was not added as an extra item for machine-picked cotton since much of the hand-picked cotton was also defoliated in the same way.

By thus ridding the stalks of leaves, the bolls are exposed to the sun rays which hasten the opening of the cotton and facilitate somewhat the harvesting of cotton by both hand and machine methods.

#### *Variety Influence*

There is some indication that cotton variety may be important in terms of adaptation to mechanical harvest. Additional studies are now under way at the Delta Branch Experiment Station, Stoneville, Mississippi, and further evidence will be secured from actual field experience, but sufficient data are now lacking from which to draw any definite conclusions with reference to the importance of variety on machine harvest.

#### *Cotton Gin Cleaning Equipment*

Considerable progress has been made in the development and installation of driers and cleaning equipment on modern cotton gins. Further progress is needed, however, as evidenced by loss of grades. Significant progress, however, appears to have been made during the past season. A newly designed cleaner called the "impact

cleaner" was installed late in the season, and the results obtained on late season, very trashy hand-picked, machine-picked, and snapped cotton were striking. Cotton that would have undoubtedly been classed as strict good ordinary was raised to strict low middling and some even to middling as a result of the use of this cleaner. There is also some question as to whether this cleaner will give the same results on early picked cotton as on late picked cotton.

The successful development of satisfactory cleaning equipment will eliminate the most significant single item of cost associated with the mechanical harvester. An approach to the solution of this problem is being made through breeding of varieties better adapted to mechanical harvesting, through establishment of cleaning equipment on pickers, and through development of better drying and cleaning equipment at the gins.

#### *Cotton Left in Field*

The amount of cotton left in the field as a result of machine operation over that which would have been left by hand-picking is a loss that needs to be considered along with the other cost items.

A detailed daily record on the basis of actual boll count was kept on one plantation throughout the season and the results showed that 91 percent of the cotton open at the time of harvest was picked by machine. Thus 9 percent of the cotton was left either on the stalks or on the ground. Estimates were made on other plantations, and it would appear, even though objective data were secured from only one plantation, that this percentage loss is about average for all the plantations studied. The losses were apparently higher in some instances and lower in others. Progress is being made in this respect through breeding and machine improvement. Some cotton will be left in the field even when hand-picked.

If we assume, therefore, that with hand labor approximately 2 percent of the cotton will be left, then there is a net loss of 7 percent of cotton due to machine operation. On the basis of current prices for hand-picked cotton and cottonseed and after allowing for the cost of picking, this is the equivalent of about \$7.62 per bale. However, from the standpoint of the producer, the loss of cotton is partly offset by the additional weight of machine-picked cotton which is due to foreign matter added in the picking process. Tests show that machine-harvested cotton has about 7 percent more foreign matter than hand-picked cotton. The cotton left in



the field, however, is an economic loss and should, therefore, be considered in any general comparison of the two methods of harvesting cotton.

*Machine vs. Hand Picking Costs*

All items of operating cost and losses associated with machine-picked cotton considered, the actual direct cost of operating the picking machine is one of the smallest items involved. See table 6. Total costs and losses, including cost of picking, loss in grade, and loss of cotton left in field, was \$33.40 per bale in 1944.

TABLE 6. COMPARATIVE COST OF MACHINE- AND HAND-PICKED COTTON, MISSISSIPPI DELTA, 1944

	By machine	By hand
Cost of picking	\$ 7.38	\$37.76
Loss in grade	18.40	—
Loss of cotton	7.62	—
Total	\$33.40	\$37.76

The cost of hand-picking per bale (1600 pounds of seed cotton) averaged \$2.36 per hundred pounds or \$37.76 per bale on the plantations included in this study for 1944. Comparisons at different picking rates can be readily made by the reader. See table 6.

*Favorable Factors in Shift to Mechanization*

Under conditions of stringent labor shortages, such as existed in 1944, there are certain advantages associated with machine operation that may not be reflected in comparative cost figures. The timeliness of harvest is an important factor, since the quality and grade of cotton usually deteriorate rather rapidly as the season advances due to weather conditions. The worry and uncertainty of getting the cotton picked under any conditions is also an important factor.

There are also certain other factors that are not reflected in the comparative cost figures in this report that are significant in terms of a shift to machine harvest. On the large plantations there is a heavy capital investment in living quarters and a recurring upkeep cost that is quite heavy. Moreover, seasonal labor is usually required even under the sharecropper system, the recruitment of which is bothersome and expensive under conditions of a relatively

adequate labor supply. Adoption of the mechanical picker would, as has already been suggested, make feasible more complete mechanization in the whole production process and would reduce or practically eliminate the cost of maintaining a large number of tenant houses and the bother and expense of labor recruitment and labor management problems.

The relative over-all cost of mechanical harvesting versus hand-picking will, of course, be the major factor in determining the rate and extent at which shifts are made to machine harvest. Such a shift, however, will involve a rather drastic reorganization of plantation operation. A careful over-all analysis, therefore, of operation under a system of machine operation compared with operation under the hand labor system will be required before all the cost factors can be considered for comparative purposes. Further studies will make such comparison possible.

#### *Retarding Factors in Shift to Mechanization*

Even though there is evidence that the key to complete mechanization of the cotton production industry is closer to reality today than ever before, any assumption that there will be a rapid and extensive shift to complete mechanization should be examined carefully. Had the mechanical picker been at the technological stage of development at the outbreak of the war that it is now, and had these machines been available during the war period, there can be little doubt that extensive utilization of mechanical harvesters would have resulted.

Distinct progress in mechanized cotton production will, no doubt, continue to be made in the postwar period, but the rate and extent of mechanization may be at a slower tempo than many people now anticipate. In the first place, agriculture continues to stand face to face with the problem of an increasing potential capacity to produce out of proportion to its capacity to gain outlets for its products. Secondly, some of the rural farm labor that will be displaced have had almost no experience with industrial discipline and complicated machinery, and some of them have had little experience in independent self-direction as a result of the paternalistic character of the plantation system.

These special handicaps, coupled with the distinct possibility that there will be an increase generally in the number of rural persons hemmed in by limited opportunities in both city and

country, may further retard the shift to complete mechanization. It should not be forgotten, furthermore, that less than a decade ago the leading newspapers in this area were advocating the junking of all mechanical cotton pickers in the Mississippi River as anti-social instruments and economically detrimental to the people within the area. Also the Agricultural Adjustment Administration was following a policy of restricting or attempting to restrict farm labor displacements. In case of rather widespread unemployment, it is quite probable that certain social and administrative restraints will again be used to discourage further farm labor displacement.

Finally, the shift to mechanical operation will all but destroy the old plantation system as it has existed since shortly after the Civil War. The large operating units under a single management will continue, but the existing paternalistic relationship between management and labor, the "furnish" system, the share cropper pattern of operation—in short, the very heart and soul of an economic and social institutional system that has become a distinctive symbol and traditional agrarian way of life in the Cotton Belt of the South, will have passed out of existence. Vested economic interest in the operation of phases of the old system, sentiment, and the heavy hand of inertia, will delay and hinder rapid shifts even assuming favorable economies associated with such shift.

#### *Influence of Technological Advance on Producers*

The assumption that widespread shift to mechanical production of cotton will automatically solve the income problem of cotton producers seems to be rather widely accepted. Such assumption needs critical examination.

As a result of the existence of a large number of independent production units and intense competition, most of the gains in more efficient production in agriculture are, sooner or later, passed on to the consumer. Furthermore, the gains that do accrue to the producer are usually capitalized into increased land values. If improvements were adopted by producers simultaneously, consumers would undoubtedly get most of the benefits of increased efficiency quickly, but one of the most significant impacts of technological advance in agriculture, however, is that farmers do not and cannot apply at equal rates the results of science and invention. New and old techniques continue side by side—the

one-horse plow and the tractor operate in adjacent fields; one-horse wagons and modern trucks transport cotton to the same market; and very likely, the power harvester and the laborer armed only with his bare hands and a sack across his back will both continue to harvest the American cotton crop for some time to come.

The areas that will receive the greatest direct benefit from economies growing out of mechanization will be those areas in a position to first take advantage of the opportunity. There is still another benefit that will flow from production efficiency at this particular time. And this benefit needs special emphasis. The current and prospective competitive position of American cotton is the most hazardous and precarious in its long history. Lower production costs reflected in lower selling price will strengthen the competitive position of cotton and result in a larger volume of consumption in both the domestic and foreign markets.

#### *Social and Economic Effect of Mechanization*

*Plantation areas.* A shift to mechanization of the cotton harvest will have its effects on both the cotton plantation and the "family size" farm unit, but the repercussions will be of a different nature. Mechanization will, of course, come first in the plantation areas, which will in turn tend to force changes in farm organization and operation in the non-plantation areas. Despite certain gains that may accrue to certain producers and despite the longtime gains to society in more efficient production and the improved competitive position of cotton, the immediate resultant economic and social dislocations and changes may be painful for both type areas unless "off farm" employment is available. If so, the displaced laborers as well as those who remain on the farm will be benefited.

Complete mechanization of cotton production in the plantation areas is not expected in the near future. But assuming relatively complete mechanization of the cotton harvest together with fuller mechanization of other production processes, this will mean a significant displacement of labor in the cotton plantation areas. Even though the population density within the plantation areas is little, if any, higher than that for the non-plantation areas of the Southeast, cotton not only plays a much more important part in the economy of the plantation areas than it does in other areas, but the plantation is much better adapted to more complete mechanization.

Under relatively complete mechanization, it is difficult to forecast the probable displacement numbers, but such displacement obviously will be high. The labor required to produce an acre of cotton using a mechanical picker is only 37 percent of the labor required to produce an acre of cotton using hand labor for harvesting, the equivalent of a 63 percent reduction in total man-hour requirements. This percentage change assumes the usage of multiple row planters and cultivators, but even with multiple row equipment, already in use, there is little doubt that still further reductions will be made in man-hour requirements in planting and cultivating when mechanical pickers can be introduced. Thus a conservative estimate of labor displacement runs from 55 to 65 percent.

A few plantations are already operating on a ratio of about one family for each 100 acres of cropland by utilizing seasonal labor for chopping and picking. In 1940 there was one family for each 27 acres of cropland in the Delta area. On the assumption that widespread adoption of the picker would make possible adjustment of the labor force to 100 acres of cropland for each family instead of 27 acres per family as in 1940, then 73 percent of the present families would not be needed.

In 1940 there were 64,683 farm families, or a total farm population of 287,111, in the 10 all-Delta counties. A 73 percent reduction would mean that the 10 all-Delta counties alone would lose 47,218 families and 209,591 in rural farm population. But, as a matter of fact, the area has probably already lost from 30 to 35 percent to the Selective Service and to war industries since 1940. If postwar conditions are such that only a few agricultural workers return to the area, then obviously the effect of mechanization will be correspondingly less severe.

*Non-plantation areas.* Relatively complete mechanization of the cotton harvest and in turn cotton production will have its effect on the non-plantation areas of the Cotton Belt even though the adjustments will be somewhat of a different nature. The ratio of farm population to cropland indicates a relative dependence on intensive crop production equal to that in the plantation areas.

The non-plantation areas of the Southern cotton states are characterized by small operating units. Despite the fact that most of these units have only a small acreage of cotton, cotton and cottonseed products constitute the major cash income crop, and in fact, there is no alternative crop outside the concentrated

tobacco, peanut, and a few high specialty crop areas that will provide acreage or labor returns anywhere nearly equal to that of cotton.

Many of these farms are too small to shift to mechanized operation; the topography of many others hinders or precludes shift to mechanized operation; many of them, equipped as they are now with little farm machinery and equipment, provide, under these conditions, even less than full employment the year round; and finally, the landscape is characterized by extensive erosion and poor management practices. The availability, therefore, of effective cotton picking machines and other mechanized equipment provides only limited opportunities for improved practices and increased income in the absence of drastic reorganization and enlargement of operating units.

The contention that these small "upland" operators can take advantage of mechanized operation either through cooperative purchase or custom service overlooks the fact that such an arrangement guarantees neither increased production nor cheaper production. As a matter of fact, if mechanized operation merely displaces hand labor without providing alternative employment opportunities, cash costs may move up without corresponding increase in income. With income already normally near the subsistence level, any such adjustment might be intolerable. In other words, any labor income on these small units is just that much additional income. The cotton picker would cut down sharply on practically the only source of employment for women and children on these small farms, which is desirable from both a social and economic viewpoint, provided of course some other means of maintaining or improving the present income can be found.

With the coming of mechanized cotton production and its concomitant economies in the areas adapted to mechanized operation, the areas of small cotton farm operation, under the impact of assumed lower cotton prices, may be forced to shift more to livestock and other crops. Such an adjustment will mean a more extensive type of agriculture, which in turn means that operating units will have to be enlarged and more machinery, equipment, buildings, and other operating facilities provided. This will involve a very considerable reduction in farm population within these areas, change in ownership patterns, additional credit, and significant adjustments in the whole range of service institutions. There



is no reason to believe that the adjustments will be any less painful or disturbing than those taking place in the plantation areas.

### *General Summary and Conclusions*

There is evidence that the key to the successful mechanical harvesting of cotton and in turn the complete mechanization of cotton production, is closer to reality today than ever before. Actual farm experience with a sufficient number of machines during the past two or three seasons in the Yazoo-Mississippi Delta has demonstrated the technical and economic feasibility of harvesting cotton with machinery. With the advent of a successful cotton picking machine, the only serious bottleneck to complete mechanization of cotton production will be that of properly thinning and weeding the cotton.

The average cost per bale of machine harvest of 2,229 bales of cotton by 12 machines during the 1944 season was as follows: direct operating cost, \$3.84; depreciation and interest cost, \$3.54; grade loss as a result of mechanical harvest, \$18.40; value of cotton left in field that would have been picked by hand labor, \$7.62; total, \$33.40.

On the plantations using mechanical pickers the cost of hand-picking a bale of cotton at the prevailing rate of \$2.36 per hundred was \$37.76 on the basis of 1600 pound seed cotton per bale.

The rate and extent of shift to mechanical harvest in the immediate future will depend upon a number of unpredictable influences such as: supply and cost of hand labor; alternative employment opportunities for displaced farm labor; realization of anticipated progress in technical improvement of picking machine, of cleaning devices at the gin, and in the breeding of varieties better adapted to mechanical harvest; and finally, the discovery of ways and means of utilizing machines for harvesting cotton in the rolling upland, small farms, small field areas of the southeast.

The assumption that widespread shift to mechanical production of cotton will automatically solve the income and market outlet problems of cotton producers merits critical appraisal. Past experience has demonstrated that production efficiency gains are, for the most part, sooner or later passed on to consumers, or that whatever gains that do accrue to producers are capitalized into increased land values. Society would, however, gain as a result of

any efficiencies associated with shift to mechanization and the competitive position of cotton as well as the cotton producer would be distinctly improved.

A shift to mechanization of the cotton harvest will leave its impact on both the cotton plantation and the "family size" farm unit. Relatively complete shift to mechanized operation will mean a heavy displacement of labor in both types of areas. The traditional plantation system as such will undergo significant changes. The whole institutional arrangement within the plantation areas will be subject to drastic change and the farm population may shrink some 55 to 65 percent.

In the small or "family size" farm areas of the Cotton Belt where the pressure of farm population against land resources is equal to or greater than in the plantation areas, adjustments looking towards a more extensive agriculture and a displacement of farm population only slightly less than in the plantation areas may take place. Such adjustments would mean the enlargement of operating units with more machinery, equipment, buildings, and other operating facilities and a greater amount of capital investment. In the absence of other employment opportunities either on the farms with some other intensive enterprise or combination of enterprises or off the farms within the areas, the whole range of institutional service patterns may undergo significant change within these areas.

American cotton production must be made more efficient if it is to compete successfully in the market place with foreign grown cotton and synthetic and substitute products and at the same time bring the producer anything like an adequate income. The economic and social dislocations and adjustments as well as the ultimate benefits that rather complete mechanization of cotton production and harvesting will inevitably bring, must be shared by society as a whole.

## A CRITICAL EXAMINATION OF MARKETING RESEARCH

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THE Bureau of Agricultural Economics recently had occasion to draw upon secondary sources for data on marketing costs and margins. For this purpose it briefly abstracted and card-indexed 589 bulletins and other reports of agricultural marketing research, after examining several thousands, most of which had no bearing on the subject. Although these reports do not represent complete coverage of the marketing research publications of agricultural experiment stations and Federal government agencies, they do constitute a very large sample which furnishes some useful illustrations, at least, for discussing the present subject. Researchers of other Federal or State agencies may have access to these cards.

Sorting these reports on the basis of certain factors significant in evaluating the character and effectiveness of marketing research yields some interesting comparisons. (See table 1.)

Marketing research consists essentially of a critical analysis of the existing marketing system, leading to suggestions for improvement. It is hoped that benefits will result from this constructive criticism of existing marketing institutions and methods. Marketing researchers, likewise, should benefit from occasional frank examination and suggestive criticism of their own efforts.

The following evaluation is offered in this spirit. If the appraisal is not too complimentary, readers are asked to bear in mind that the author of these remarks has himself engaged in marketing research for many years, and is willing to bear his share of the responsibility for any inadequancies disclosed by this examination.

### *Descriptive vs. Problem Approach*

Much of the marketing research which has been done to date has been almost purely descriptive in nature. Of these 589 published marketing research reports, 82 percent are of this character, and only 18 percent deal with problems and their solutions. Many of these descriptions merely particularize the obvious. Frequently

<sup>1</sup> The research reports referred to herein were indexed and classified by C. C. Curtiss, also of the Bureau.

we have been inclined to outline a project of "broad scope," collect a lot of miscellaneous facts about the marketing of a commodity or the operations of a given type of marketing agency, arrange these data in tables, charts and maps, and then prepare a textual description of the figures. We disclose to the expectant reader that there are so many cream stations in the area studied, doing an average annual volume of business of so many dollars and pounds, that such-and-such a percentage of the butterfat marketed in a given State is sold through cream stations, and that these stations ship their cream to so many creameries. Of course, anyone acquainted with the industry already knew approximately the conditions specified, but they seem pleased to have the specific figures down to 2 decimal points, and not too many skeptics stop to ask, "So what?" We hope it is not because the people who might be expected to benefit from marketing research do not read such bulletins.

This type of descriptive research has been useful as a basis for teaching courses in marketing, and has furnished a profusion of material which has given a partial answer to the oft-quoted question, "What goes on in the dark?" It has been useful, although by no means fully adequate, in training personnel for research and extension work in marketing. The spreading of this general information has helped to bottle up some of the more common misconceptions about marketing, and thereby helped to avoid the kinds of mistakes which were so frequently made in past years in setting up cooperative marketing enterprises and in proposed legislation dealing with marketing and transportation. To a rather limited extent it has served as the basis for improvement in marketing services, such as grading and standardizing.

In general, however, these are not ends in themselves, but means to an end, which is the improvement of marketing efficiency. This improvement might take the form of a reduction in the cost of rendering given marketing services, or an increase in the utility of service being rendered at a given cost, or both. If one well acquainted with the field of marketing research were to be asked suddenly, "Just what specific improvements in marketing have resulted from all of this research?" he might be surprised at his difficulty in furnishing a satisfactory answer. It would be much easier to cite illustrations of marketing research which has shown what cannot be done to improve marketing. Pricking the balloons

of uninformed marketing evangelists has been a very useful contribution of marketing researchers, since it has prevented waste of money and effort in trying to accomplish the impossible. But something more constructive also is needed.

Does the fact that much of the marketing research has served merely to describe and justify present agencies and methods indicate that there is really no room for substantial improvement? A good many people, unfortunately, are coming to feel that the answer to this question is "yes." More and more, economists not directly engaged in marketing research seem to have come around to the view that no material reduction in the spread between the producer and the consumer is possible with or without marketing research, and that any improvements in the utility of marketing services which are likely to result from marketing research are of minor consequence compared with the solution of such problems as stabilization of the price level, enhancement of consumer incomes, supporting prices through Government programs, and readjustments in the utilization of agricultural resources. This viewpoint is widely reflected in such current materials as the preliminary report on Postwar Agricultural Policy of the Committee of the Land Grant Colleges.

In the century preceding the great depression people placed major, if generally unmerited, blame for unsatisfactory prices and farm incomes upon the marketing system and transportation agencies. The pendulum now has swung to the other extreme, and most of our present-day economic planners hardly give lip service to marketing devices as a means of improving agricultural conditions or of getting cheaper food to the masses of low-income consumers. About the only place where marketing seems still to find large favor as a factor in agricultural policy is in the committee rooms of Congress and the deliberations of our farm organizations.

These negative attitudes seem to be based to a considerable extent upon what is perhaps a fact: after 40 years of marketing research we know a great deal about how products are marketed, the nature of the operations of agencies through which commodities move, and the reasons why marketing costs are incurred, but we still have not shown how to make substantial improvements in marketing. The research bulletin which contains a suggestion promising to effect a material reduction in marketing costs or a really worth while increase in the usefulness of marketing services

is a rarity. The "conclusions and recommendations" found at the end of some bulletins frequently are but common-sense observations which could have been made just as well before the "study" was begun. This paucity of constructive results is in spite of the fact that hundreds of trained research economists and statisticians have been employed and millions of dollars have been spent in marketing research.

There have been some major improvements in marketing during the 40 years in which formal research in the marketing of farm products has been conducted. Unfortunately for the record, these appear to the author to be attributable more to the individual initiative of private business and of State and Federal service personnel than to the results of professional economic research. One of the most important improvements, from the standpoint of increasing efficiency and reducing the costs of marketing, has been the development of the self-service super-market and modern type of retail chain food store. This development perhaps has done more to get cheaper food to low-income consumers than all of the excellent Government programs for this purpose combined; yet, the day before the first of these stores was opened many marketing researchers probably would have been as certain as they seem to be now that retail food distribution costs could not be substantially reduced. Any study of retail food-store operating costs and practices made at that time probably would have found ample justification for the costs then encountered, and only negligible savings possible from minor reorganization of operations. The imagination to visualize new ways of doing things has been associated too rarely with marketing research.

A second major improvement in marketing has been the development of new and more efficient processing methods for dairy products, poultry and eggs, meats, fruits and vegetables, and other commodities. Researchers in the physical sciences seem to have contributed much more to these developments than have those who are concerned with the economic phases of marketing research. In fact, we may be justified in saying that relatively few market researchers even now seem to be much aware of the revolutionary implications of the freezing preservation of foods, drying of milk, consumer packaging of meats and other technological advances which are now with us or in the immediate offing. The physical aspects of these technological features of marketing can be best



left to the chemist, plant pathologist and others; but the economic aspects are equally important, and marketing research can make tremendous contributions by awakening to the possibilities and problems involved.

Another outstanding advance in marketing during the past 40 years has been the development of grading and standardization and market news services. Even here the record is far from being complimentary to marketing researchers. The programs arose, not out of research, but chiefly from the efforts of "practical" people drawn from the trade or marketing service work. This is not said in criticism, since market researchers had little to offer in setting up the programs. Countless opportunities to contribute toward improvement of grades and standards and market price quotations have passed up by those engaged in marketing research. Many, possibly most, of the grades now in use are little more than modifications of trade terms and customs, little attention having been paid to the determination of actual consumer preferences and their relation to quality standards throughout the marketing system. A prize example of this is our system of butter scoring. Critics of enforced consumer grade labeling have a point in that many of the existing grades bear relatively little relation to those quality considerations which most influence consumers in their buying. We have made hardly a beginning in improving the whole system of grading and standardization through acutely pointed research.

Market news is in just as much need of research designed to discover the kinds of quotations most needed by farmers and agricultural businessmen, and especially to improve the representativeness of the quotations. The inadequacies of many currently available market price quotations are nothing short of appalling when they are examined under an even mildly critical microscope, despite the progress which has been made in recent years in extending the scope of the Government's market news service. Relatively few wholesale price quotations are sufficiently specific and representative for anything except to give a day-to-day general picture of price trends. Quotations too frequently are given in terms of a wide range, and there are indications that the grades supposed to be represented frequently vary from market to market according to differences in the reporters' judgment. Many of the wholesale quotations for various reasons are believed to be un-

trustworthy for use as an average price, representing, for example, price bases on which premiums and discounts are regularly allowed in connection with actual sales. Here, as in grading and standardizing, we are very much in need of marketing research addressed to the specific problems involved and which will do more than merely point up the value to farmers of quality standards and price quotations.

Still another marketing field in which some people, at least, will claim progress has been made in recent years is in the "control" of market prices through Government programs of various kinds, such as marketing agreements, diversion programs, storage operations and the like. Inevitably some mistakes have been made in developing and applying them, and the voices of those few marketing researchers who have had important constructive comments to make may not always have been heard by those formulating the programs. Yet, again, it may be suspected that the paucity of real research bearing on these operations and problems has been one reason why the marketing economists have not had more influence on them. One can count almost on the fingers of one hand the marketing researchers who have dealt vigorously and effectively with these problems in their analyses.

Perhaps these criticisms of the effectiveness of marketing research in obtaining important improvements in marketing represent too severe a condemnation, and overlook many individually minor but collectively worthwhile contributions. It has been said that not all of the best research gets to be published in bulletins. There have been some outstandingly excellent contributions, but they represent exceptions to the rule which is the theme of this paper, and which presents a striking challenge to marketing researchers.

The time has come to abandon stodgy descriptions and particularizations of the obvious, and take a step forward by dealing in a realistic way with the many important marketing problems to which answers must be obtained through research before definite improvement in marketing efficiency and reduction in marketing costs can be obtained. This implies the need for a critical re-examination of the methods employed in marketing research. It also emphasizes the need for more imaginative, original thinking by researchers who expect to be judged by the good they accomplish rather than by their number of bulletin pages or tables of data.

A first step in putting marketing research on a more useful plane would be to adopt as far as possible the methods which have been applied so successfully for so many years in the physical sciences. Briefly, this methodology is: first, to inventory problems likely to be encountered; second, to formulate hypotheses regarding possible solutions; and third, to subject these hypotheses to objective verification by controlled experimentation. Although some purely descriptive research still is carried on in the physical sciences, much of even the so-called "pure" research is conducted on this basis. The only necessary difference between the physical sciences and marketing in this regard is that marketing uses statistical controls whereas the physical sciences use laboratory controls. And even here the difference is less than might be supposed, since the results of even laboratory experiments must be checked for statistical significance in the same way as are the results of statistical experimentation. Every experiment is a problem in sampling.

No collection of miscellaneous facts or organization of descriptions will substitute for the placing of primary emphasis on problems, the exercise of real imagination in formulating hypothetical solutions, and the use of rigorous statistical procedures in verifying our *a priori* conclusions. The mere enumerator will never make important contributions to marketing research. He will simply wind up with a lot of facts and no idea of what to do with them.

This basic conflict in methodology may be illustrated by a hypothetical research project dealing with refrigerator cars. Under the too frequently encountered methods of doing marketing research the procedure would be to outline a project, and eventually write a report, consisting of the following sections: (1) a history of the development of refrigerator cars, including data on the number in use in different years and changes in size or capacity and other factors; (2) principal uses made of refrigerator cars, including data on the quantities of various commodities transported by refrigerated freight and express, and perhaps points of origin and destination of refrigerator car shipments; (3) a description of how refrigerator cars are loaded and unloaded, and of various marketing features found in connection with them, such as shipping point inspection certificates; (4) a summary and conclusions, the latter being that refrigerator cars occupy an important place in the transportation of agricultural perishables, and that no other mode of transportation is likely to replace them entirely.

In reaching this end result the researcher proceeds to get out

a questionnaire to fruit and vegetable shippers, cooperative associations, and other users of refrigerator cars in which he asks for: (1) name and address of organization, (2) annual volume of business, (3) products marketed, (4) number of freight refrigerator cars loaded in previous years, (5) number of express refrigerator cars loaded, (6) destination of refrigerator cars loaded, (7) railroads over which refrigerator cars moved, (8) number of re-icing points, (10) number of crates loaded per car, (11) amount of money paid for freight and express charges, (12) number of cars arriving in good and bad condition. When the questionnaires are in, the data are tabulated, with due precautions to insure correct rounding of third decimals, and a number of tables are prepared. This information will no doubt constitute a mental stimulus to some sophomore student burning midnight oil over his assignment for marketing class in the Alpha Gamma Rho house some years later, but is hardly calculated to result in better refrigerator cars.

If he follows the problem approach, the researcher may first talk with a number of people who use refrigerator cars or are connected with their operation, getting their views about what is wrong with refrigerator cars and how these defects might be remedied. He studies the literature. He sits in a quiet place doing some quiet thinking. He builds in his mind his dream refrigerator car, with many new features, using new materials such as light-weight metals, and with artificial electrical or chemical refrigeration. This car is a monstrosity. He then takes each feature of the car apart mentally, by obtaining facts and reasons bearing on its practicability. One by one, some of the features are eliminated and others are expanded. Eventually the monstrosity becomes a reasonable facsimile of an improved refrigerator car, but it is still on paper. The next step, so far very seldom used by marketing researchers, is to persuade somebody to build the new refrigerator car and try it out in actual operation, to discover its hidden defects and the further improvements needed.

These are the methods used by those who have accomplished so much in improving the efficiency of industrial production. They are the methods used by those who seem to have accomplished most in improving the marketing of farm products. They are the methods of the research department of the chain store, of the large processors of farm products, of the manufacturer of new packaging materials used to contain food products. There is no good reason why

the economic scientist concerned with marketing cannot use the same effective principle of methodology.

It would not be effective, of course, to attempt to make half-baked chemists, engineers, or CPA's out of marketing economists. Nor do we wish to make the mistakes of a few physical scientists who have fondly imagined they were economists as well, and dabbled with unfortunate results in the economic phases of marketing research. But most important marketing problems, such as the refrigerator car problem, have many elements in addition to the economic. Someone must integrate these interests, and this seems to be a job which the marketing economist can do as well as anyone. All such tasks, in any event, call for genuine ocooperation among the physical and economic scientists working as a team. The marketing economist should know enough about the technological phases of the problem to be able to tie together the several elements of the problem. Frequently, he will have to obtain this knowledge by contacts with physical scientists after he starts work on a particular project.

The last step in conducting research along these lines—actual trials of new methods or equipment in commercial operations—requires funds and the cooperation of people engaged in business. This financial and moral support will be forthcoming when marketing researchers show that they have practical, constructive ideas to offer.

This is not intended to imply, of course, that some description and use of statistics is not appropriate in marketing research. On the contrary, there are many phases of the work which require such an approach. But we should place emphasis in our research on problems, and any type of proposed research project which is purely or largely descriptive in nature should be automatically flagged down for careful examination before time and money are spent on it.

#### *Geographical Boundaries of Marketing Research*

Another weakness of past marketing research has been the large amount of duplication involved in conducting projects on a State basis, and the accompanying failure to deal adequately with many marketing problems which are broader in geographical scope than State boundaries.

An example of this is research conducted during the twenties on

the operation of livestock shipping associations. Nearly every State in the livestock-producing region eventually had a research project of this kind, issuing bulletins containing dot maps showing the location of livestock shipping associations and tables giving their average volume of business and discussing appropriate methods of operation and bookkeeping. Much of the really useful material in any one of these bulletins would have been equally applicable in the other livestock States, and the purely enumerative aspects, although interesting, were of little or no practical importance. It may be suspected that an author of one of these efforts, wanting to avoid "copying" and to be original, sometimes omitted worthwhile analyses which had appeared in some previously published bulletin of the same type, thus limiting the usefulness of his own report.

The States involved could have greatly increased the effectiveness of this research by combining their efforts to get out one report covering the subject thoroughly, with individual researchers taking responsibility for those portions of the subject which they were in the best position to handle. In this way, duplication of effort could have been avoided and the informational material available to patrons, directors and managers of shipping associations would have been superior in most cases to that which was furnished on a State basis.

Many other examples of this kind of duplication and relatively ineffective effort will occur to anyone acquainted with the history of marketing research. Research in the operations of cream stations and centralized creamery procurement, local trucking and market milk assembly and distribution are cases in point. The work of the New England Research Council on Marketing and Food Supply furnishes a good example of what can be done to avoid such inefficient use of research facilities, and of the consequent increase in the dividends obtained from marketing research expenditures. In connection with some problems the improvement which would result from a greater degree of cooperative effort among researchers would not be so much in the avoidance of duplication as in more complete coverage of problems which cut across State lines. An example of this is the subject of market price differentials for livestock which is now being dealt with by the Corn-Belt Livestock Marketing Research Committee. If marketing research in general



were coordinated or integrated on the basis of geographical boundaries associated with specific problems, such excellent examples of cooperative research efforts would not be so nearly unique, but would be commonplace.

There has been an increasing recognition of the fact that many or most marketing problems are broader than State boundaries, as indicated by the encouragingly large proportion of the reports covered by table 1 which deal with subjects of regional or national scope (49 percent combined). But we still have much to do in effecting better working relations among marketing researchers in dealing with such problems. This will be particularly true as the multiplication of research projects gradually exhausts the subjects of more local significance and the work progresses into those phases of marketing beyond the primary markets for farm products.

#### *Long-time Projects Emphasized*

Most (88 percent) of the projects reported in those 589 publications were not addressed to current problems immediately demanding attention (such as what to do with egg-drying plants after the war), but were of a long-time or continuing nature. This has certain advantages in extending the useful life of the results of research, but may indicate some lack of flexibility in planning and executing marketing research programs. The outbreak of war forced those engaged in many other lines of professional work, including industrial research, to set aside peacetime preoccupations and devote themselves to finding solutions to war problems. It would appear that marketing researchers have had more difficulty in reorienting themselves, and many important wartime decisions have had to be made without benefit of research results which could have helped a great deal.<sup>2</sup>

How to administer marketing research programs so as to preserve the benefits of continuity of effort and to give due recognition to the subject-matter interests of individual researchers, and at the same time to anticipate and help meet urgent marketing problems that arise with changes in economic conditions, is a very difficult question to answer. Perhaps, at least, more attention should be given to the problem.

<sup>2</sup> Thomsen, F.L., *The Impact of War on Marketing Farm Products*, THIS JOURNAL, February 1943, pp. 140-142.

TABLE 1. CHARACTERISTICS OF 589 MARKETING RESEARCH REPORTS WHICH HAVE BEEN ABSTRACTED AND CARD-INDEXED FOR USE OF MARKETING RESEARCHERS, BY THE BUREAU OF AGRICULTURAL ECONOMICS

	Number	Percent
1. Marketing system coverage		
a. To first processor.....	170	29
b. Processing.....	122	21
c. Distribution.....	194	33
d. All.....	103	17
Total.....	589	100
2. Type		
a. Descriptive.....	481	82
b. Problem.....	108	18
Total.....	589	100
3. Timing		
a. Immediate.....	71	12
b. Continuing.....	518	88
Total.....	589	100
4. Commodity groups		
a. Livestock.....	71	12
b. Dairy.....	139	24
c. Poultry and eggs.....	19	3
d. Grains.....	53	9
e. Cotton.....	30	5
f. Tobacco.....	8	1
g. Fruits and vegetables.....	174	30
h. Wool.....	7	1
i. Cut-across.....	69	12
j. All other.....	19	3
Total.....	589	100
5. Geographical		
a. State.....	207	35
b. Regional.....	72	12
c. National.....	217	37
d. City or county.....	93	16
Total.....	589	100
6. Marketing or transportation		
a. Marketing.....	349	59
b. Transportation.....	133	23
c. Cut-across.....	107	18
Total.....	589	100
7. Functional		
a. Assembling.....	130	22
b. Grading and standardization.....	8	1
c. Financing.....	3	0
d. Storing.....	21	4
e. Processing.....	80	14
f. Transportation.....	66	11
g. Dispersion.....	164	28
h. Cut-across.....	117	20
Total.....	589	100

*Commodities Covered*

The organization of agricultural marketing research has resulted in a coverage of commodities (see table 1) which seems to reflect the agricultural interests of the States which have engaged most actively in marketing research, as much or more than the relative importance of the products or the number and acuteness of the problems involved. Only 3 percent of the studies, for example, dealt primarily with poultry and eggs, although the marketing of these products perhaps involves as many problems and opportunities for improvement as any, and they represent at least minor farm enterprises in all States. Prolificacy of the Northeastern States' researchers is discernible in the high percentage (one-fourth) of the reports concerned with dairy products, as is also the fact that market milk distribution has seemed to offer a relatively simple research project which could be tackled without too much trepidation by beginners in the field. The author of these remarks well remembers reporting for his first job of marketing research and being assigned a market milk project for this reason.

Fruits and vegetables get the biggest play of all the commodities, which is perhaps natural in view of the large number of separate products in this group and the general dissatisfaction of producers with widely fluctuating prices and large marketing margins associated with such perishable and seasonal commodities. It seems probable, also, that one reason for the popularity of this group among researchers is the fact, referred to later, that many economists in the field have considered the scope of their research limited mainly to problems of assembly and first sale, which are relatively more important in the fruit and vegetable field than for some other commodities such as livestock and grains.

It is notable, also, that only 12 percent of these reports cut across commodity lines, which indicates concentration of researchers on descriptive studies of commodity marketing rather than on functional analyses.

*Concentration of Attention on Assembly and Primary Markets*

Perhaps the most important weakness of all in past marketing research has been the concentration of attention of researchers on those steps in the marketing system between the farmer and the first processor or primary market. This portion of the marketing system absorbs a very small proportion of the consumer's dollar, and even if research in this field were of maximum effectiveness,

relatively little could be done through it to improve the over-all efficiency of marketing. For example, recent research of the Bureau of Agricultural Economics shows that those processes connected with ginning and merchandising the raw cotton take less than 3 percent of the consumer's dollar paid for cotton goods. Most of the consumer's dollar is absorbed by manufacturing, wholesaling and retailing. Retailing alone takes a much larger share of the consumer's dollar than the combined operations of ginning and merchandising the raw cotton, spinning the yarn and weaving the cloth, and dyeing and finishing the cloth.

If substantial progress is to be made in reducing the costs of marketing, major attention must be given to those segments of the marketing system which absorb the larger part of the total costs. Moreover, it is in those portions of the marketing system that are beyond the sale of the raw product in which occur other marketing phenomena having the most important relation to prices received by farmers, the development of new market outlets, and the promotion of wider distribution.

Despite these rather obvious facts, relatively little attention of marketing researchers has been given to those portions of the marketing system beyond the first processor. This point tends to be covered up by the figures given in table 1, which indicate that about three-fourths of the 589 reports deal with phases of marketing beyond the first processor. An important reason for this apparently favorable showing is the large amount of attention which has been given to market milk distribution, clear through to the final consumer, and to fruit and vegetable marketing. The selection of bulletins to be indexed, based on their contribution to our knowledge of marketing costs, also biases this proportion. For most commodities, such as livestock, cotton, grains and tobacco, nearly all of the marketing research has been concerned with the assembly phases of marketing rather than processing and distribution. This also is indicated by the fact that 23 percent of the reports that are summarized in the table dealt with transportation, reflecting the large amount of work done on local trucking from farm to primary market.

One reason for this condition is that the term "marketing" has been too narrowly interpreted by some, including a few administrators of research funds, as referring only to operations connected with the raw agricultural product. Another reason for this situation

is the fact that marketing researchers usually have been trained in subject matter connected with the handling of primary products at the farm end of the marketing system, and frequently have been hesitant to deal with the more complicated and technical phases of marketing beyond the first processor. Still another factor is the prohibition against use of State funds for travel beyond State boundaries, which in itself is enough to effectively limit participation in research projects covering the more important portions of the marketing system. And finally, the close contact of marketing researchers with agricultural organizations and farmers, and the natural interest of the latter in marketing phenomena close to the farm, has led to the encouragement of work at that level.

The way to rectify this serious defect of marketing research is to first obtain understanding on the part of experiment station directors, farm leaders and legislators that the farmer is just as much concerned with what happens to his products after they leave the county or area boundaries as he is in the marketing processes near the farm. The next step is for marketing researchers to prepare themselves to do work in these other fields by a process of self-education, including both the giving and taking of courses which deal with the more advanced phases of marketing including some technology. A dairy marketing researcher, for example, might reasonably be expected to know something about the technology of milk drying. The third step would be to raise our sights in planning research projects by thinking in terms of the whole range of marketing operations from the farmer to the consumer.

Following such a policy, for example, we may want to think of transportation not merely in terms of local trucking or railroad loading facilities, but in connection with such problems as the development of new types of railroad car equipment, the use of air transport, speeding up transportation service in the handling of perishables, short-circuiting terminal market bottlenecks by the use of portable refrigerated equipment permitting less-than-carload shipments of perishables to surrounding smaller cities and towns, and questions relating to the freight rate structure. We would give attention to such things as legal and tax discriminations against chain stores and trucking systems, legal prohibitions against food manufacturers engaging in distribution to the final consumer, the desirability of so-called "fair trade" laws affecting price flexibility, labor practices in marketing and transportation which affect mar-

keting efficiency and costs, and similar matters which have seemed far removed from the type of marketing research centering upon the assembly end of the marketing system.

*New Horizons for Agricultural Marketing Research*

The indifferent or unfavorable attitude of many people toward marketing research, which has been previously referred to, reflects what seems to this writer a rather general feeling that marketing research no longer is young and vigorous; that it is merely going through routine motions which have been described many times before, like a group of persons indulging in calisthenics. This appraisal may not be correct. But it is certainly true that marketing research has hardly touched upon the wide field of usefulness open to it. Studies directed at important problems, conducted with up-to-date methodology, and with maximum attention to cooperative effort among researchers and between public and private agencies affected, should yield results of value far beyond their cost. The abandonment of outworn tradition and the vigorous adoption of improved methodology can lead the way to new areas of activity of tremendously increased usefulness to farmers, agricultural businessmen, and the general public.



## ANALYZING LABOR REQUIREMENTS FOR CALIFORNIA'S MAJOR SEASONAL CROP OPERATIONS

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COMMON usage calls for superlatives in describing the phenomena of California. So it was that California's wartime farm labor crisis was *greatest* and *worst*. Any farm labor shortage is a threat to the nation's supply of food, feed, and fiber. In California the significance of a shortage is only more acute because of the high proportion of the nation's food production affected. In the common term of production, cash farm income, California represents about eight percent of the nation. In pounds of food, California represents nearly half of the commercial fruit production and more than ten percent of the vegetables.<sup>1</sup> Many fruits and vegetables are high labor requirement crops. California's labor shortage was also pronounced because of the proximity of concentrated areas of war industry offering employment inducements considerably more attractive than agriculture offered at the time.

The peak of the World War II farm labor crisis in California took place in the fall of 1942 when the shortage was estimated at between 35,000 and 40,000 workers for major seasonal operations.<sup>2</sup> Distributed equally with the work, this would mean about five workers to do the jobs of six, but by local areas of need, this proportion was frequently five workers to do the jobs of eight, ten, or more. The situation would have been even graver in the subsequent war years if supplemental sources of labor had not been found in the volunteers, Mexican Nationals, and Prisoners of War.

Geographically, California's farm labor problem is unusually complex because the temporary demands of widely scattered areas are dependent upon a migrant work force. During the war years this problem was intensified because normal movement of the remaining migrants was curtailed by shortages of vehicles, tires, and gasoline. According to estimates based on the year 1944,<sup>3</sup> thirteen of the fifty-eight counties have seasonal peaks requiring 10,000 or more workers. The maximum seasonal needs during 1944 for

<sup>1</sup> Based on reports of BAE, USDA.

<sup>2</sup> *California Weekly Agricultural Labor Report*, USES, 1942.

<sup>3</sup> *Labor Requirements for California Crops*, FL Project, AES, Berkeley, March, 1945.

twenty-five counties exceeded their respective minimum needs by 1,000 percent of more, not considering minor peaks between the minimum and maximum periods. The following table illustrates the extremes in a few principal counties.

LABOR REQUIREMENTS FOR MAJOR SEASONAL OPERATIONS, 1944<sup>4</sup>

County	Minimum		Maximum	
	Workers	When	Workers	When
Fresno	400	March	21,000	September
Imperial	Negligible	August	15,000	Feb.-Mar.
San Joaquin	1,000	February	17,000	Sept.-Oct.
Santa Clara	1,400	April	23,000	September
Sonoma	400	Mar.-Apr.	12,000	Aug.-Sept.
Stanislaus	200	March	13,000	Aug.-Sept.
Tulare	1,800	Mar.-Apr.	14,000	Dec.-Jan.
STATE	60,000	Mar.-Apr.	182,500	September

During the war years the Farm Labor Project of the Agricultural Extension Service has been concerned with the supplying of workers to agriculture through a system of county Farm Labor offices.<sup>5</sup> Because it was necessary to evaluate requests for workers, and because it was necessary to develop supplementary labor sources, this agency found need for more specific analysis of California's seasonal needs. Professor R. L. Adams had done considerable work in this field in connection with farm management studies.<sup>6</sup> Further knowledge was needed regarding labor requirements on a current and local basis. This was particularly important when the Farm Labor Project was called upon to certify as to the needs for Mexican Nationals imported for farm work, and to allocate the supply upon arrival. It was also important because government funds were being used through other agencies to facilitate transportation and housing of these workers.<sup>7</sup> Errors in estimating needs could be costly.

The Farm Labor Project made its first annual study of labor requirements for the year 1943.<sup>8</sup> A follow-up study, with certain re-

<sup>4</sup> Including drying labor but excluding packing house and shed labor in large non-farm establishments.

<sup>5</sup> Responsibility for farm placement service was transferred to AES from USES in the spring of 1943.

<sup>6</sup> Published by Giannini Foundation, University of California, Berkeley.

<sup>7</sup> Mexican Nationals were recruited and transported by the WFA Office of Labor. Their housing was facilitated by the California Farm Production Council, emergency state agency.

<sup>8</sup> *Labor Requirements for California Crops, 1943, FL Project, Berkeley, May 1944.*

visions, was made for 1944. The purpose of this paper is to describe the program and method of study for the latter year, 1944.

The method of analysis, procedures, and forms used were developed by the Farm Labor Market Analyst<sup>9</sup> under the direction of B. H. Crocheron, Director of Agricultural Extension, and Warren R. Schoonover, State Supervisor of the Farm Labor Project. The study was conducted as a county program during the winter months of 1944-1945 although some of the data were gathered during the preceding seasons of the specific crop operations. The Farm Advisor<sup>10</sup> and the County Farm Production Committee acted as sponsors and advisors, and the field work was directed by the local Farm Placement Manager of the Farm Labor Project. The basic information gathered was of two types: (a) Agricultural statistics for the county, including acreages and production of specific crops, and (b) Information regarding the conditions and factors which determine the labor requirements. Such factors include the disposition of crop, the major operations, man-day or crew-day output, extent of mechanization, length of the typical work week, seasons of activities, etc.

In collecting the necessary agricultural statistics, a practical attempt was made to avoid census taking and duplication of effort if reliable and adequate current data were available from existing information sources. These might include the Farm Advisor's own records, those of the Agricultural Commissioner, AAA, grower associations, cotton gins, canneries, shippers, etc. Because the value of the study as a basis for 1945 planning was dependent upon an early release date, and because final figures were not always available from these sources at the time needed, field surveys were necessary in a number of instances. Estimates for the county were based on data from a selected sample of typical farms producing most of the crop.

Information regarding the labor factors was based on actual observations on typical farms and knowledge provided by farmers contacted during the regular operations of the Farm Labor office.<sup>11</sup>

<sup>9</sup> Lenhart, M. W., *County Program for Determining Farm Labor Requirements*, Manual of Instructions (Rev. 11-44), FL Project, AES, Berkeley, November, 1944.

<sup>10</sup> County agents of the Extension Service in California have the title of *Farm Advisor*.

<sup>11</sup> It was a policy in the undertaking to economize in travel, time and effort, and to take as little of the farmers' time as necessary to assure reliable results. A small sample of farms was usually adequate because the Farm Advisor's and Farm Placement Manager's acquaintance with local agriculture enabled a fairly reliable selection of representative or typical farms.

Utilization of the information gathered was accomplished by means of the *Work Sheet for Computing Farm Labor Requirements*.<sup>12</sup> The *Work Sheet* provides a practical formula for using the data to arrive at the approximate number of workers needed by weeks. A separate *Work Sheet* was prepared for each major crop in the county. These were worked out locally and reviewed and checked by the Farm Labor Market Analyst with the assistance of the farm management specialists of the AES. A state summary of the results was prepared, entitled *Labor Requirements for California Crops, Major Seasonal Operations, Based on estimated acreages and production for 1944*.<sup>13</sup> The summary is in the form of a calendar showing the labor requirements by weeks for each principal agricultural county. See sample page (Fig. 1).

The crops to be covered were pre-determined for each county in the set-up of the study. In the earlier 1943 survey the determination was left to the judgment of local personnel but the results were understandably somewhat inconsistent because of differences in the relative importance of the same amount of a given crop in different counties. For example, a county whose major crop might require a peak of 5,000 workers would tend to ignore one requiring a peak of 500; while the same amount—or even less—of the latter might be the major crop in a smaller agricultural county. Local personnel assisted in the selection of major crops and some additions to and deletions from the selected lists were made during the course of the study as the labor needs were analyzed in the field.

Usually a crop was included if at any time it might have a seasonal need for at least 100 hired temporary workers. Crops with lesser requirements were also included if the time of need overlapped with that of other crops, contributing to a local labor problem. Too, minor crops, or minor activities for major crops, were sometimes covered if distance between the area of need and a labor center made it difficult to secure even a few temporary workers. For example, it is easier to recruit 500 workers in some counties than 50 in others. It was reasoned that some slight inconsistency in coverage was offset by the need of the information for the problem area. It was not reasoned conversely, however, that major activities could be omitted if there seemed no apparent labor problem. Many unexpected losses in all parts of the farm labor supply in

<sup>12</sup> Form FL-16 (Rev. 11-44), FL Project, AES. See figures 2 and 3.

<sup>13</sup> Published by FL Project, AES, Berkeley, March, 1945.

recent years have proved that any major labor requirement is a potential problem and knowledge concerning it should be available.

A major seasonal operation was defined as one which is conducted during a special season of the year and which requires the addition of hired temporary workers to the farm labor force in order to get the work done. The survey instructions included a list of probable operations to be covered for each crop if applicable, even though the temporary labor requirements of some were low. This was to facilitate state total estimates for such operations, which might be a state problem if not a local one. Additional operations were covered for some counties. For example, because of an extremely large acreage, an activity which might not require a significant number of workers for a particular operation in most counties, might require quite a number in the exceptional county. Potato irrigating was included for Kern County for this reason. To irrigate the 53,600 acres (40,000 more than in any other county) there was a temporary peak need for 600 irrigators.

The extensive and detailed analysis made seemed justified when the results brought to light many wide variations in the labor requirements for a given crop in different counties. The variations frequently had little relation to the relative acreages involved. Differences in yield, varieties, and disposition of crop had a significant effect on the labor requirements. Differences in farm practices, mechanization, and in worker output accounted for some variation. Other differences were traceable to the distribution of the crop on large or small farms. For example, the haying labor requirements tended to be higher and the season shorter in counties growing hay for feed on small farms, with many farms harvesting simultaneously than in counties producing hay commercially on large farms where equipment was more mechanized and the same crews worked over larger acreages during a longer period.

The accompanying examples for peaches (Figs. 2 and 3) will illustrate the *Work Sheet* formula for computing the labor requirements, and also the reasons for variation in labor needs. The examples do not refer to specific California counties, but are typical of the general differences between the handling of the crop in the Sacramento Valley canning peach areas and the San Joaquin Valley market and drying peach areas. To illustrate the variations in labor needs due to differences in yield, disposition of crop, etc., the same acreage was assumed for both County I and County II.

# LABOR REQUIREMENTS FOR CALIFORNIA CROPS—1944

Line No.	COUNTY AND CROP	Approximate Acreage Harvested	APPROXIMATE PRODUCTION	Total Man-Weeks of Labor	(Number of workers, weeks ending)											
					JANUARY				FEBRUARY				MARCH			
					8	15	22	29	5	12	19	26	4	11	18	25
1	IMPERIAL - TOTAL			401,700	8,530	10,520	11,170	11,340	16,780	16,920	15,460	15,520	16,110	16,440	15,350	15,130
2	Grapefruit (P)	3,800	24,750 tons	4,150	100	130	130	150	170	170	170	170	170	170	170	170
3	Prunes	450	1,350 tons	2,350	200	300	300	300	280	300	150	140				
4	Add: Packing labor			900	80	130	140	140	140	130	80	60				
5	Cabbage (P)	1,300	11,900 tons	5,000	350	480	480	350	300	270	260	250	240	210	180	180
6	Carrots	8,600	3,087,000 ears (6 1/2)	110,150	450	2,100	2,500	3,500	6,600	6,600	6,500	6,300	6,300	6,300	6,300	6,300
7	Add: Packing labor			8,600		250	300	350	400	400	450	450	450	450	450	450
8	Lettuce	20,000	3,600,000 crates	46,600	3,000	2,600	2,500	2,500	2,400	2,200	1,500	1,000	700	700	400	400
9	Add: Packing labor			14,400	1,400	1,400	1,500	1,500	1,500	1,400	1,000	700	450	450	300	300
10	Melons—Cante & Misc	19,700	78,400 tons	56,000	900	900	900	900	1,100	1,200	1,200	1,400	3,800	3,700	3,600	3,600
11	Add: Packing labor			7,200												
12	Melons—Watermelons	7,000	49,150 tons	12,000	140	100	200	350	350	350	350	250	200	350	500	500
13	Onions, Dry	300	50,000 cwt	3,120	100	100	100	100	100	60	50	50	50	30	20	
14	Peas (P)	8,500	11,500 tons	25,800	500	600	650	1,700	1,800	1,900	2,000	2,000	2,000	2,000	1,800	1,800
15	Squash, Summer	3,000	900,000 crates	13,500	350	350	450	450	500	550	600	600	600	600	600	600
16	Add: Packing labor			4,500	120	140	180	180	200	200	200	200	200	230	230	230
17	Tomatoes	3,350	16,700 tons	22,100	450	450	400	400	500	500	500	500	500	550	550	1,100
18	Add: Packing labor			3,700	70	70	70	70	80	90	100	100	100	100	150	150
19	Flax	45,000	43,700 tons	3,000												
20	Grain, Small	60,000	90,000 tons	2,800												
21	Grain, sorghum	30,000	27,000 tons	1,500	200	170	120									
22	Hay, Alfalfa	130,000	520,000 tons	37,400												
23	Seed, Onion	800	160 tons	3,450	120	250	250	250	130	80	100	100	100	100	100	100
24	Sugar beets	5,500	110,000 tons	13,200	100				150	250	250	250	250	200	200	200
25	KERN - TOTAL			285,150	6,750	7,130	7,030	5,920	4,950	4,130	3,240	2,840	3,160	740	610	700
26	Apricots (P)(D)	400	1,600 fr tons	1,450	50	50	40	20								
27	Grapes, Raisin	9,300	19,500 dr tons	14,450	700	750	1,000	1,000	900	600	450	350				
28	Add: Drying labor			2,000												
29	Grapes, Table (I)	6,100	35,300 fr tons	15,550	400	400	550	550	400	300	200	200				
30	Add: Packing labor			2,550												
31	Grapes, Wine	2,000	20,200 fr tons	3,300	100	100	100	100	100	50	50	50				
32	Oranges, Naval	1,450	290,000 phd bxs	1,600	80											
33	Add: Packing labor			1,000	50											
34	Peaches (D)	420	4,000 fr tons	4,000	70	80	90	100	100	80	70	60	40	40		
35	Pears	2,000	14,000 fr tons	12,250	400	500	500	350	250	200	100					
36	Add: Packing labor			3,050												
37	Asparagus (P)	750	41,250 crates	2,000												
38	Melons—Cante, Misc(P)	1,000	7,500 tons	1,700												
39	Onions, Dry	600	120,000 cwt	1,950												
40	Peas (P)	3,600	468,000 crates	11,000												
41	Tomatoes	53,600	11,524,800 cwt	53,000	400	750	750	1,000	1,000	800	750	750	250	100	200	200
42	Add: Shed labor			14,000												
43	Tomatoes (P)	4,000	16,000 tons	8,600												
44	Cotton	61,000	86,550 bales	100,000	4,500	4,500	4,000	2,800	2,200	2,000	1,500	1,300	1,000	500		
45	Grain, Small	130,000	103,300 tons	3,000												
46	Hay, Alfalfa	60,000	310,000 tons	27,500												
47	Sugar beets	1,500	19,500 tons	1,400												
48	KINGS - TOTAL			146,950	4,730	4,640	4,650	4,200	4,150	3,650	2,580	2,150	1,130	380	100	100
49	Apricots (P)	2,600	16,300 fr tons	6,850	130	170	250	400	400	400	400	250				
50	Add: Drying labor			9,400												
51	Grapes, Raisin & Wine	10,550	33,350 fr tons	8,700	400	420	450	450	450	450	430	400	300	300		
52	Add: Drying labor			900												
53	Peaches (P)	2,850	24,750 fr tons	10,550	200	250	350	350	300	200	150	100				
54	Add: Drying labor			3,050												
55	Melons	900	6,150 tons	800												
56	Cotton	43,000	52,400 bales	83,000	4,000	3,800	3,400	3,300	3,000	2,600	1,600	1,400	750			
57	Flax	5,500	3,200 tons	200												
58	Grain, Small	142,000	69,200 tons	2,700												
59	Hay, Alfalfa	40,000	200,000 tons	20,800												

/ / Indicates harvest season although some of the workers may be engaged in overlapping activities (P) Includes packing and/or shed labor (D) Includes drying labor

FIGURE 1



**CALIFORNIA  
EMERGENCY FARM LABOR PROJECT**

OFFICE OF THE DIRECTOR  
COLLEGE OF AGRICULTURE  
BERKELEY 4, CALIFORNIA

**WORK SHEET FOR COMPUTING FARM LABOR REQUIREMENTS**

(See Manual for Instructions)

PERIODS		Year 1946	1. Productive acres	2. Yield per acre	3. Production (In usual units. Specify size or weight. Indicate whether fresh or dry weight, field or packed box, etc.)	4. Production (In units for computing. Specify.)
On		Prod.	10,000	12 F Y		
Off	No. 1	Final	Non- productive 2,000	Percent of normal 95	120,000 F Y	See

Disposition of crop. (Indicate amount to each)

Packing house \_\_\_\_\_  
at least \_\_\_\_\_  
Capacity 120,000 F T \_\_\_\_\_  
Dry \_\_\_\_\_  
Dry yard \_\_\_\_\_  
Dehydrator \_\_\_\_\_  
Other (Specify) \_\_\_\_\_

\* Steps in computing total man-weeks of labor necessary to handle the crop. Note: Entries in columns (B), (C), (E), and (G) must be in same units.

[illegible]

2. Distribution of man-weeks. From (H). Note: Number of man-weeks per week represents number of workers required per week. Round all figures.

[illegible]

Approved by \_\_\_\_\_

Date \_\_\_\_\_

**FIGURE 2**

WORK SHEET FOR COMPUTING FARM LABOR REQUIREMENTS  
(See Manual for Instructions)

Crop	PEACHES	Year 1944	1. Productive acres	2. Yield per acre 8 F T	3. Production (In usual units. Specify size or weight. Indicate whether fresh or dry weight, field or packed box, etc.)	4. Production (In units for computing. Specify.)
County	No. 13	Final	10,000	Percent of normal	80,000 F T *	SAFE

5. Disposition of crop. (Indicate amount to each)

Packing house or shed	45,000 F T	Dry	Dry yard	25,000 F T	Other (Specify):	
Cannery	5,000 F T	Dehydrator			Local market	5,000

6. Steps in computing total man-weeks of labor necessary to handle the crop. Note: Entries in columns (B), (C), (E), and (G) must be in same units.

Activity or Operation	Amount of Crop Involved (Acres or other units as in Item 6)	Daily Output of Crew	Average No. in Crew	Output per Man-Day (for (C) + (D))	Average days work per week	Output per Man-Week (for (E) x (F))	Total Man-Weeks (for (G) + (H))	Season				Percent of Work	
								Start	From	To	End	Fixed Labor	Peak Labor
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)				(J)	
Prune	12,000 A *			.25 A	5	1.25 A	9,600	11-1	12-15	1-15	2-15	90%	10%
Thin	10,000 A			.2 A	6	1.2 A	8,555	4-25	5-15	6-5	6-15	90%	10%
Pick to market	50,000 F T			.75 F T	6	4.5 F T	11,111	6-15	7-15	8-25	9-10	97%	3%
Pick to can or dry	50,000 F T			1.0 F T	6	6 F T	5,000	7-15	7-25	9-1	9-5	97%	3%
Cut to dry	25,000 F T			.5 F T	6	3 F T	8,555	7-15	7-25	9-1	9-10	98%	2%
Dry	25,000 F T	6 F T	4	1.5 F T	6	9 F T	2,778	7-15	8-1	9-5	9-15	90%	10%
Packing shed	45,000 F T	56 F T	80	.7 F T	7	4.9 F T	9,184	6-15	7-15	8-25	9-10	100%	0%

\* Ac. Acres.

F Ts Fresh tons

7. Distribution of man-weeks. From (H). Note: Number of man-weeks per week represents number of workers required per week. Round all figures.

Week Ending (Cross out Year not used)		Operation: PRUNE		Operation: THIN		Operation: To cut PECK (To can To dry)		Operation: CUT TO DRY		Operation: DRY		Operation: PACKING SHED		Total All Operations	Do not write in this column
1943	1944	% of Work	No. of Workers	% of Work	No. of Workers	% of Work	No. of Workers	% of Work	No. of Workers	% of Work	No. of Workers	% of Work	No. of Workers	Number of Workers	
1-8	1-8	9	800											800	
1-13	1-13	9	800											800	
1-20	1-20	9	800											800	
1-27	1-27	8	800											800	
2-3	2-3	6	600											600	
2-10	2-10	4	400											400	
2-17	2-17	2	200											200	
2-24	2-24														
2-28	2-28														
3-4	3-4														
3-10	3-10														
3-17	3-17														
3-24	3-24														
3-31	3-31														
4-7	4-7														
4-14	4-14														
4-21	4-21														
4-28	4-28			6	500									500	
5-5	5-5			9	800									800	
5-12	5-12			14	1,100									1,100	
5-19	5-19			18	1,500									1,500	
5-26	5-26			18	1,500									1,500	
6-2	6-2			18	1,500									1,500	
6-9	6-9			12	1,000									1,000	
6-16	6-16			6	500									500	
6-23	6-23														
6-30	6-30					5	500					5	400	900	
7-7	7-7					4	700					7	600	1,300	
7-14	7-14					5	900					8	700	1,600	
7-21	7-21					8	1,500	5	450			10	900	2,450	
7-28	7-28					10	1,700	9	800			11	1,000	2,700	
8-4	8-4					11	1,800	12	1,000			11	900	3,100	
8-11	8-11					15	2,000	16	1,200			14	1,000	3,200	
8-18	8-18					15	2,000	16	1,200			14	1,000	3,200	
8-25	8-25					15	2,000	16	1,200			14	1,000	3,200	
9-1	9-1					9	1,600	14	1,200			14	1,000	3,200	
9-8	9-8					7	1,000	10	900			11	900	2,700	
9-15	9-15					5	500	2	150			7	200	1,100	
9-22	9-22					1	100					4	100	250	
9-29	9-29														
10-6	10-6														
10-13	10-13														
10-20	10-20														
10-27	10-27														
11-3	11-3														
11-10	11-10														
11-17	11-17														
11-24	11-24														
12-1	12-1														
12-8	12-8														
12-15	12-15														
12-22	12-22														
12-29	12-29														
Totals		100%	9,600	100%	8,480	100%	16,100	100%	8,400	100%	2,800	100%	9,200	54,500	

Prepared by

Approved by

Date

FIGURE 3

But before analyzing the variations, let us consider the use of the *Work Sheet* and the labor requirement formula as illustrated for County II,<sup>14</sup> which has more complicated factors than County I. The basic crop data include the acreage, yield per acre, production, and disposition of crop as called for in Sections 1 through 5. Section 6 contains the steps in computing the total man-weeks of labor necessary to handle the major seasonal operations, which are listed in Column (A) of this section. These are: prune, thin, pick to market, pick to can or dry, cut to dry, dry, and pack. The reason picking was separated by disposition of crop is that selective picking by color and size for market was found to have a lower worker output than picking for canning or drying, when less selection is necessary.<sup>15</sup> Cutting was considered separately from the other dry yard operations because women could do the cutting and it was therefore significant to know this part of the labor requirement separately.

Column (B) contains the amount of crop involved in the operation, indicating the size of the task. If the operation is measured by the acre, the amount would be in terms of acres. If the operation involves handling the product, the amount would be stated in tons or number of boxes handled. It was recommended that containers be converted into tonnage weight for most fruits, except citrus, because this would mean that the computations would involve smaller numbers and, accordingly, be more easily and more accurately computed.

Column (C) provides the crew-day output for certain combined operations, such as those of a dry yard or packing shed, because the tasks concerned were so varied that it was impractical to measure the output of individual workers. It was possible to measure the output of the crew and from this information, and the number in the crew, as given in Column (D), it was possible to determine the *equivalent* of a man-day output. The operation "dry" included all miscellaneous dry yard tasks except cutting which is shown separately for the reason indicated. The operation listed as "packing shed" includes all packing house work involving the handling of the fruit.<sup>16</sup>

<sup>14</sup> The dimensions of the actual *Work Sheet* are 11"×17". The size provides space for several operations and for writing information in longhand or on the typewriter (12" carriage). Folded in half, the form is letter size (8½"×11") which is convenient for filing and mailing.

<sup>15</sup> Not always the case. Some counties pick all the crop on the same basis and it is later sorted, with the choice fruit going to market and the remainder to dry yard.

Column (E) contains the output per man-day for the operations, stated in the same units as the amount of crop in Column (B). The worker output factor was the usual daily output of the *typical* worker under typical crop and working conditions existing in the year covered. It was obtained in a number of ways—sometimes by selecting the mode in a listing of observations from the sample of typical farms. Sometimes it was more accurately secured from payroll statistics when workers were paid on a piece-work basis. Sometimes it was weighted by distinct differences noted by variety of the fruit or by districts varying in working or crop conditions, none of which could be considered typical for the county. In extreme cases like this, however, it was usually recommended that the parts of the crop be considered separately in a breakdown similar to that shown for picking in this illustration. If the daily output of the worker was not readily measureable, as for grain hands, sugar beet workers, and other crew laborers, the output was the *equivalent* per man-day obtained by dividing the crew-day output by the number in the crew, or Column (C) divided by Column (D).

Column (F) contains the average number of days worked per week, which was determined by weather, nature of the work, and habits of the workers. Picking might be in progress seven days a week, but the average days worked refers to the number put in by the typical person which might be but five or six days. This limitation of the work week was practical because it allowed for non-productive time by persons who would necessarily be part of the required work force in the area in order to get the work done. The Farm Labor Project must think of labor requirements in terms of human beings, rather than man-hours of requirement per acre, for example. It was assumed that for practical purposes, a man-week of work represented one person on the job and the usual accomplishment which could be expected of him during a week. Ignored, however, were labor turnover and the lag between jobs by shifting workers. There is little reasonable basis for estimating these factors, which represent additional non-productive time. Justification of this limitation in the figures may be found in the fact that during periods of labor stringency, the recruitment agency should attempt

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<sup>18</sup> Packing labor was covered because the Farm Labor Project operates under the definition of agricultural labor which includes the "preparation of fruits and vegetables for market." Packing labor requirements of large non-farm establishments were usually considered separately so that they could be excluded when analyzing the on-farm problem.

to meet the minimum reasonable requirements only, and then assist in the more complete utilization of the minimum work force on hand.

Column (G) contains the output per man-week, which is obtained by multiplying Column (E) by Column (F) for each operation.

Column (H) contains the total man-weeks of labor necessary to accomplish the task listed in Column (A), and was computed by dividing the size of the task in terms of acres or units of production, by the output per man-week, or Column (B) divided by Column (G).

Column (J) contains the season, subdivided into four dates representing the start of activity, the beginning and end of the peak, and the end of the activity. This was determined from observations, shipping data, or other clues including inspection reports of tonnages weighed into the canneries. The seasonal dates were used to guide in distributing the man-weeks in Section 7.

Column (K) gives a *very general* estimate of the proportion of the work done by hired labor and by the farmer and unpaid family workers. Its principal value was to guide in throwing out borderline seasonal operations which, as it turned out, were done primarily or entirely by family labor. It was found that although family members were usually at work during the seasons of the covered operations, their share of the man-weeks given to the operation was not often significant, especially when distributed by weeks. Instead, family workers were supervising and doing auxiliary tasks to keep the work going, and for which man-weeks of labor requirements were not computed.

Section 7 contains the distribution of the man-weeks of labor by weeks during the seasons when the work was done. The resulting figures represent the approximate number of workers needed during those weeks. The man-weeks were distributed for each operation listed in Section 6, but not necessarily in the same breakdown. For example, it will be noted that the man-weeks for picking were added together and distributed in one column, although weighted in proportion to the season of picking for market and of picking to can or dry. The man-weeks were distributed by applying an estimate of the percent of work done by weeks to the total man-weeks for the given operation as shown in Column (H). For a product measured at a central point of handling, such as cotton at the gins, a guide to percentage distribution for the harvest operation could be secured from the percent of the total production handled by weeks. Dis-



tribution of the man-weeks on a percentage basis was not always necessary, however. By guessing the probable peak number of workers and distributing the remaining man-weeks on the basis of knowledge of the probable rise to and descent from the peak, a trial distribution could be made. If the total in the column agreed with the total man-weeks computed for the operation, the guessed peak and distribution could be accepted as reasonable, deleting the step of computing the percentages. If the guessed distribution proved in error, adjustments could be made until a reasonable distribution and the correct total of man-weeks were secured.

The man-weeks added horizontally for each week indicates the approximate number of workers to handle the crop's most significant operations. The grand total of this column should balance with the sum of the totals for the operations, which in turn should balance approximately with the total of Column (H). It will be noted that all figures in Section 7 were rounded—usually upward—for convenience and because the estimates could be assumed to represent probable minimum requirements.

In comparing the labor requirements for 10,000 acres of peaches in County I and County II, the following facts are of interest. Although the production in County I exceeded that in County II by 50%, the total man-weeks were 26% less—primarily because of the difference in the disposition of the crop in the two areas. Considering picking labor only, the man-weeks for County I exceeded those for County II by less than 4% even though 50% more tons were picked. This is explained upon comparing the worker output for picking in the two counties, Column (E). In County I the output was 1.2 tons, with all picking for canning; while in County II it was .75 ton for market picking and 1 ton for picking to dry or can. The most likely reason why the output for picking for canning in County II was slightly less than in County I is the difference in yield per acre, which was higher in County I. When the fruit is abundant, it takes less time to fill a box.

In addition to comparing the labor requirements in terms of total man-weeks, let us note the differences in the numbers of workers required by weeks. Because of the longer season for picking in County II, the peak number of workers needed at any one time was about 39% less than the number needed during the peak in County I, even though the total man-week requirement for picking was only 3½% less. But considering the additional labor necessary to dry and pack the crop in County II, the peak number of workers



needed for all the harvest operations in County II exceeded the peak number for the harvest in County I by about 42%. The value of the work sheets in portraying the distinct differences in the nature of the peach labor problem in the two counties is readily discernible.

The uses of the work sheets and the state summary have been varied. First of all, the preparation of the work sheets was an education for the field personnel of the Farm Labor Project, acquainting them with the agriculture of the county and furnishing an operating guide in labor recruitment. The figures were particularly helpful in evaluating the requests for Mexican Nationals and other supplementary workers by local growers. At the state level the work sheets were helpful in bringing to light the reasons for some difference in the apparent labor needs of two areas, as for peaches in Counties I and II, also for evaluating the relative needs for Mexican Nationals in different counties at a given time, and for what work. The state summary was used by the field personnel in giving information to migrants inquiring for work in other areas and in relating local labor problems to those of nearby areas. The state summary was helpful to the state administrators in analyzing the state total needs and in anticipating problem areas and problem seasons. It served as a guide in estimating probable shortages and in making requests for supplementary workers such as volunteers, Mexican Nationals, Prisoners of War, etc.—also in the distribution of such workers. The state summary also served to present the scope of California's agriculture and labor needs to the national administrators of the War Food Administration.

In conclusion, it should be pointed out that farm labor requirement analysis of this type requires almost continuous attention because of rapid changes in many of the factors involved. Although the early release of the 1944 summary served as a guide for long range planning for 1945, follow-up studies continue with preliminary 1945 work sheets being prepared about six weeks, or even three weeks in advance of the problem operation—just as soon as the acreage, yield, and season seem fairly predictable. This is the time of greatest need for the information since it immediately precedes the time of labor recruitment operations. The labor supply is becoming evident and the differences in the predicted supply and the estimated requirement give a practical basis for immediate recruitment activity at the local level, and for possible emergency adjustments in the allocation of supplementary workers at the state level.

## NOTES

### WILL GOVERNMENTAL PROGRAMS ALTER THE STRUCTURE OF GOVERNMENT?

THE choice in the modern world with respect to the part to be played by government in economic activities clearly is not one between some participation or none at all. Instead, it relates to the kinds and degrees of government participation. *Laissez faire*, if it ever did exist, is ruled out in the complex economic society of today. In arriving at decisions with respect to the role of government, it is not adequate to think only in terms of what government can or cannot do. We also should give due weight to effects of governmental programs on the citizens themselves, on the relationships between the citizens and their government, and on the structure or organization of government. This aspect of public policy has received entirely too little attention in the formulation of programs

The development of a money economy inevitably led to the centering of attention on matters of price. Much of current public policy and proposals for expanding the role of government relates in one way or another to prices or other factors affecting income and its distribution. It is clear that faith in the operations of the market as a register of price has been and is undergoing modifications. Pressure is strong for governmental participation in, if not actual usurpation of, the market's function of arriving at prices.

The protective tariff is one of the time-honored devices for influencing the market by reducing supplies of foreign origin with the intent of increasing prices for the benefit of the domestic producer. While taxes usually are viewed as providers of public revenue, they also may be used to affect competition. The federal tax on colored oleomargarine, some state taxes on the same product, and special taxes on chain stores are illustrations. Taxes also may be employed for the specific purpose of changing the distribution of income.

Health and sanitary regulations, and regulations relating to grades, standards, labelling, working conditions, maximum hours of work, and minimum rates of pay are other forms of governmental controls which may have an important bearing on price. Antitrust laws, patent rights, curbs on monopoly and restraint of trade, assistance and encouragement to labor and farmers' organizations

may be cited as other illustrations of governmental activities in this category.

The types of activity referred to above serve to modify the effect of forces in the market rather than to have the government take the place of the market in arriving at prices. There are instances of more positive and direct action by government. The regulation of transportation and public utility rates falls in this class. Such regulation rests on the limitations of competition in protecting public interest in the case of "natural" monopolies. In recent years, however, pressure has increased to have governmental agencies take an active part in price determination to yield higher prices for specific, special interests rather than limit its concern primarily to protecting the public interest. The "stabilization" operations of the Federal Farm Board were a sample. Public funds were used to buy and hold supplies off the market in order to support a given price structure.

Subsequently, parity price was evolved as a yardstick for measuring price relationships and to serve as a goal for agricultural price policy. Considerable administrative flexibility was provided in making commodity loans under the agricultural adjustment program at the outset but by subsequent congressional action they now are made at a certain percent of parity. Congress has assured support prices for many farm products for a period beyond the war which will obligate the government to step into the market picture if and when needed to keep prices from falling below the specified level.

These activities are not restricted to agriculture. The wages and hours law establishes government control of the work week and minimum rates of pay. While the government has not committed itself to provide jobs for all workers at the established rates, pressure for such action appears to be increasing. Price-maintenance laws have been enacted to meet the demands of some lines of business. Much of the NRA program was concerned with price and wage maintenance, if not by government itself at least with strong governmental blessing and support for such activity by private groups.

What will the future bring? Clearly, the end of demands for special price action by government is not yet in sight. It is argued that farmers have a "right" to receive certain prices and that government has an obligation to guarantee that "right." It is likewise

contended that workers have a "right" to a job at certain minimum rates of pay which should be guaranteed by government. Views differ as to what such "rights" involve. Do they merely require of government that it seek conditions favorable to production and employment, or must government go further and provide individual prices, wage rates, markets and jobs?

If the government makes guarantees, it must have the means of backing them up. This calls for control. Thus, a government-sponsored price at an attractive level may result in expanding output while discouraging consumption and exports and inviting replacement by substitutes. What shall government do about these consequences? Will its price controls not force it to add rigid production control and assume responsibility for disposal? If minimum wage rates are established at higher rates than some workers can earn by their production, even in times of prosperity, will government have an obligation to supply jobs to such individuals? Will such jobs be provided by "made" work or will the government extend its operations into fields which may compete with private endeavor?

Controls once established are not easily discarded. They create vested interests in their continuance. Candidates for public office find increased temptation to rely on the vote appeal of promises to provide better prices and higher wages for their particular constituents by extension of government activity and to insulate the position of special groups with the result that welfare of all tends to be shoved into the background. Officials may be elected on the strength of their appeals to group selfishness. If this trend increases, how will it affect the nature and structure of government? Who is to represent public interest under such circumstances?

Can controls of the kind here referred to be handled effectively by any other than a strong, central government? If such a government relies for its continuance mainly on its appeal to the immediate and narrow self-interests of special groups, is the step to dictatorship a very long one? The particular banner under which that dictatorship parades into power may be less important than appears to be realized by some who express great fear of and opposition to fascism but who apparently are ready to clasp to their bosoms other ideas which in the end may prove equally restrictive of individual liberty.

This note is intended to raise questions rather than to arrive at

conclusions by endeavoring to provide pat answers. Its aim is to stimulate thinking and provoke discussion rather than to attempt to formulate any final judgment. If the points raised have any merit do they not suggest that it behooves us to "stop, look and listen" in our development of public policy and programs to assure ourselves that we are reasonably alert to the full range of consequences of any given proposal? An agile-minded friend recently quipped "the first step in sin is irreversible." This may not apply with equal force to governmental controls, but may we not arrive sooner than we expect at a point where it may be extremely difficult to extricate ourselves from the morass of regimentation so that the march actually may prove to be irreversible?

Perhaps a few tentative ideas on the role of government may be in place. Some activities have become so well-established as public functions that question no longer is raised about government performing them. No one is clamoring for a private army or navy. Police protection and, in the case of urban centers, fire protection are accepted generally as public responsibilities. Roads, schools, the post office are other accepted governmental activities. This was not always the case and that fact should make us cautious about being too dogmatic regarding what may or may not prove to be normal functions for public agencies in the future.

But what about those spheres of our economy which the government to date has left largely to private endeavor? What happens here in the years ahead will decide where the dividing line between public and private activity will be drawn. Every game requires certain rules. In simple games with a limited number of participants, the rules may be drawn and enforced by the participants. However, in most cases specific rules are needed and where any considerable number of persons are involved, a referee to enforce observance becomes essential to satisfactory results. No one will get unduly disturbed if the player of solitaire adjusts the rules to suit himself. In bridge, adherence to prescribed rules is accepted as a matter of course. A college football game would soon degenerate into wholesale mayhem were there not both rules and officials to enforce them. While there are differences with respect to the rules required, few dispute the logic of having the government serve as rulemaker and referee to see that the economic game is played fairly and in the interests of the common good. The area of disagreement expands rapidly, however, when it is proposed that the

rulemaker and the referee be called upon to run with the ball as one of the players.

There is general support for government curbs on monopolies and combinations which operate contrary to public interest. In too many cases, bias makes it difficult for an individual or a group to appreciate that the guilt is not always elsewhere. It is common to regard some one else as the culprit. Too often, competition is viewed as a desirable practice for everyone except our own group. But if private monopoly is replaced by public monopoly, is it necessarily true that it will be more attractive? May not the latter form of monopoly also be used to serve special group interests rather than the ends of general welfare? What effective controls are left if a public monopoly should go berserk and abuse its power? Some may answer that the control remains in the ballot but how effective will that be if voting is guided by considerations of special interest rather than general welfare?

Perhaps a guiding principle can be developed out of the idea that government should be concerned with general welfare, that is welfare which runs clear across the board, rather than with that of special groups. Government may be on surer ground in undertaking activities which seek to provide certain minima for all than when it endeavors to provide special privileges for certain groups. There is need for a general guide to help determine the future extent and direction of governmental participation in economic activities. Do not rural social scientists have a responsibility for taking a leading part in its development?

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FARM REAL ESTATE VALUES IN SOUTH  
DAKOTA AND THE BAE INDEX OF  
ESTIMATED VALUE PER ACRE OF  
FARM REAL ESTATE

**D**URING the recent past the writer has repeatedly read references to the 1912-14 = 100 BAE index numbers in support of what appeared to him as inflationary trends in land prices. Real estate men, country bankers, newspapers, farm papers, a state secretary of agriculture, commercial organizations and a bankers association have cited the above index in support of the contention



that current land prices in the West North Central states in general, and South Dakota in particular, were conservative or even depressed. Mark M. Regan calls attention to the widespread extent of similar misinterpretations of the 1912-14=100 index of real estate values.<sup>1</sup>

The implications or positive affirmations in the contentions referred to have been that these BAE land value index comparisons furnish "reliable statistical evidence" that Northwest land values are not inflated. The index also has been used to "prove" that South Dakota farm real estate prices during World War II have been way below normal, long-run, or justifiable levels. The rather common use of a pre-World War I base in agricultural programs and literature seems to have created a belief that prices or price relationships at that time were fundamentally and permanently right. Thus, the BAE farm real estate index number of 57 for South Dakota as of March 1, 1944, has been referred to as proof that such prices were low. It has even been stated that there is a "need" for much higher prices for the "benefit" of farmers. The 1940 census value of \$12.80 per acre for South Dakota as compared with \$38.63 for 1910 have likewise been used as "evidence" that current land prices were abnormally low.

These misinterpretations, in part at least, may be due to the apparent fact that the above index numbers and prices too often are quoted without citing essential explanations of their construction and meaning. Changes in economic conditions affecting land prices also too frequently are overlooked.

An example of change in conditions influencing the average South Dakota land value is found in data on acreage in farms and the geographic distribution of the acreage added to land in farms between 1910 and 1940. In this connection it is well to recall that precipitation in South Dakota varies from about 25 inches in the southeast to about 14 inches in the northwest. The resulting geographic variations in land prices are much greater.

By 1910 the most productive eastern one-third of South Dakota was pretty well settled. During the next 30 years the acreage of South Dakota land in farms was increased by 51 percent. Most of the increase of 13,456,692 acres has taken place since 1914. This is indicated by data on assessed acreage. This increase was distributed as follows: The 23 eastern counties increased their acreage

<sup>1</sup> "Land Value Benchmarks" in *The Agricultural Situation* for September, 1943.

by 305,429 or 3.4 percent. The 22 central counties increased their acreage by 2,415,670 acres or 26 percent. But the 23 western counties increased their acreage of land in farms by 10,735,593 acres, or 141 percent. Presumably the most valuable land in each area had been taken first.

Certainly, as far as the census values are concerned, it is obvious that the 1910 and the 1940 farm real estate price averages for South Dakota are based on lands and acreages that are neither the same nor comparable. The inclusion in the more recent census average of prices of added land of low productivity, hence of low value, has reduced the 1940 average value. Thus the 1940 state average census value would be below the one for 1910 even if the price on every tract of land had been static.

This addition to South Dakota land in farms since 1912-14 of much western land of lower productivity has been taken into consideration in the construction of the Bureau's 1912-14 = 100 index of estimated real estate values. For South Dakota the land value reports of the crop reporters, one of the chief sources of the Bureau's data, have been weighted by crop reporting districts<sup>2</sup> for all years except 1912.<sup>3</sup> "The index is weighted with constant weights. The total acreage of all land in farms reported by the census of 1925 is used for this purpose."<sup>4</sup> "Weighting within States is desirable primarily to give greater stability to an average otherwise likely to be distorted by shifts in the number of reports received from various sections of the State."<sup>2</sup>

In spite of such care in the construction of this index number, the addition of much low grade land may possibly have depressed the index somewhat in the years since 1912-14. At least, this may be implied from the following quotations: "It is believed that the department's series are much less subject to this disturbing influence (than the census series) since its crop reporters tend to be drawn mostly from established farming sections. Expansion into new areas is reflected but slowly in the number of reporters appearing on its rolls."<sup>2</sup> "The use of the index with 1935-39 = 100 does not overcome the effect of the addition of much low grade land to land

<sup>2</sup> "Appendix, Sources of Data and Methods of Computation," USDA Circular 15, "The Farm Real Estate Situation, 1926-1927."

<sup>3</sup> Letter of June 8, 1945, from A. R. Johnson, Agricultural Economist, Division of Land Economics, BAE.

<sup>4</sup> USDA Circular No. 209, "The Farm Real Estate Situation, 1930-31," pp. 64-65.

in farms during the early years of the series except insofar as the 1935-39 base period is considered more nearly 'normal' than 1912-14."<sup>3</sup>

With respect to the use of index numbers to show the World War II land price rise in South Dakota, use of the 1935-39 = 100 base seems preferable. With index numbers of this type there may be a popular assumption that 100, the base, is normal or justifiable. From this point of view a March 1, 1945 index of 119 seems more nearly right than 62, the latter being the index on the 1912-14 base.

A number of factors affecting land values have changed since pre-World War I, as Mark M. Regan so ably has shown. Land values actually have changed but the extent of these changes have not been the same in all geographic areas. Statements by various individuals and other evidence indicates that in the agriculturally newer areas in South Dakota, western, low-precipitation areas, land prices were inflated between 1910 and 1920. The following table points in the same direction.

It seems reasonable to assume that the productive possibilities of all South Dakota lands were better known in 1944 than in 1910. If this be true, it appears that many 1912-14 land values in South Dakota also were inflated. Hence, the current BAE land value index for South Dakota on the 1912-14 base may be abnormally low

COMPARISON OF 1910 CENSUS VALUES AND 1944 AVERAGE SALE PRICES PER ACRE IN  
SELECTED COUNTIES OF SOUTH DAKOTA

Counties	Computed 1910 census value of land and buildings	1944 average sale price per acre <sup>b</sup>	Normal annual precipita- tion in inches	Percentages which 1944 sale prices are of 1910 census values
Clay	\$76.28	\$82.55	25	108
Brookings	51.66	40.26	22	78
Brown	52.59	22.30	20	42
Haakon	15.21 <sup>a</sup>	1.53	16	10

<sup>a</sup> Data from cooperative study by Lincoln office BAE and South Dakota Agricultural Experiment Station. Only four counties studied.

<sup>b</sup> This is a computed figure; Haakon was part of Stanley County in 1910.

partly because many of the base year values were inflated. Not all people interpret that index in favor of higher land prices, however. An unusually well informed South Dakota real estate man said

confidentially, "It is dangerous to push land prices above the 1944 level."

All in all, it would seem desirable for the Bureau of Agricultural Economics to emphasize the use of a more recent base, possibly the 1935-39, for its current land value index. If this does not materially reduce the popular misinterpretations of the index, perhaps the BAE should also develop an economic productivity index of land values.

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#### THE CONSISTENCY OF U.S.D.A. ESTIMATES OF POSSIBLE CONSUMPTION AND PRICES OF BEEF AND PORK IN 1950

THE United States Department of Agriculture recently issued a pamphlet<sup>1</sup> containing estimates of consumption, production and prices of various agricultural commodities, figures which could be associated with certain economic conditions in 1950. The following quotation from page 5 of the above pamphlet reveals the USDA's intentions regarding the interpretation of these figures:

"If farm people are to help develop constructive programs in the post-war period, they must understand their direct interest in national and international economic decisions which of necessity will be made at the close of this war—and understand the more basic relations of agricultural affairs to over-all national and international policies. The purpose of this analysis is to provide an aid to such understanding by describing the economic conditions likely to be associated with various degrees of employment and unemployment in the post-war period, and to indicate the most probable effect of these conditions on the price-and-income position of agriculture. *The estimates presented are not forecasts of what will happen after the war, but are intended to illustrate what is most probable under stated alternative assumptions with respect to employment, price levels, productivity of labor, and related factors.* The Bureau of Agricultural Economics is the source of statistical data and estimates used in this report."

<sup>1</sup> "What Peace Can Mean to American Farmers, Post-War Agriculture and Employment." Miscellaneous Publication No. 562, U.S.D.A., Washington, D. C., Issued May, 1945.

Of the numerous estimates, the four which are given particular consideration in this discussion are the per capita consumption and prices of beef and pork. It is the purpose of this paper to examine the likelihood of the above four estimates from another point of view. The author proposes to determine whether or not the four estimates of consumption and price are consistent with one another, taking into account the facts that beef and pork are close substitutes, that relative consumption is not independent of relative prices and also that the price influence depends on the level of income. In economic theory there is a sound basis for relationships between relative quantities. Lionel Robbins,<sup>2</sup> for example, places great emphasis on the relativity of economic variables. Also, in analyzing actual statistical data it is often easier to get reliable estimates of relationships involving relative quantities and prices. Furthermore, even though relationships involving relative variables are not sufficient in planning these relationships could be used to advantage in checking estimates of actual quantities and prices obtained from other sources. In this particular case the beef-pork consumption and price ratio based on the U.S.D.A. estimates will be compared with past ratios. Also the consistency of these ratios will be checked by applying the results of an earlier study<sup>3</sup> carried out by the author.

TABLE I. U.S.D.A. ESTIMATES AND RANGE OF VALUES IN PAST

Description	1943 Value	1950 Est.	Range for 1921-1940	
			<i>Low</i>	<i>High</i>
1. Beef Cattle Price (\$/cwt.)	11.80	10.25	3.28*	10.37*
2. Hog Price (\$/cwt.)	13.70	11.25	2.60*	12.98*
3. Beef and Veal Consumption (lbs./cap.)	57.7	71.0	53.0	74.6
4. Pork and Lard Consumption (lbs./cap.)	87.1	96.0	57.7	88.9
5. Net National Income (\$ billions)	149.4	150.0	—	—
6. U. S. Population (millions)	—	144.0	—	—

\* Monthly averages.

#### *A Comparison of U.S.D.A. Estimates with Past Data*

Table I presents those estimates given in the U.S.D.A. report which will be the basis for the subsequent discussion.

<sup>2</sup> Lionel Robbins, *An Essay on the Nature & Significance of Economic Science*, 2nd ed.; Macmillan and Co., Limited, London, 1935; pp. 46-71.

<sup>3</sup> Zenon Szatrowski, "Time Series Correlated with the Beef-Pork Consumption Ratio," *Econometrica*, January 1945.

Except for income and population figures past data for the same series are given in the U.D.S.A. report<sup>4</sup> on livestock statistics. The prices used are those received by farmers. Low and high values of the series under consideration have been added in order to compare the U.S.D.A. estimates with the past and, from such a comparison, it is evident that all of the estimates are relatively high.

Since the series used in the author's study were slightly different from those estimated by the U.S.D.A. (for example, the author used the wholesale price of beef in Chicago instead of the price received by farmers), it was necessary to calculate the former from the U.S.D.A. figures. These data are presented in Table II.

TABLE II. ESTIMATES OF SERIES USED IN AUTHOR'S ANALYSIS

Description	1943 value	1950 values based on U.S.D.A. estimates	Range for 1921-1940	
			Low	High
1. Price of Beef Steers at Chgo. (\$/cwt.)	15.30	14.10	4.95	15.91
2. Price of Hogs at Chgo. (\$/cwt.)	14.31	11.75	3.04	14.01
3. U. S. Consumption of Beef (lbs./cap.)	50.1	62.2	46.4	64.9
4. U. S. Consumption of Pork (lbs./cap.)	72.9	79.4	48.1	74.2
5. Real Income (\$ per cap.)	715	715	318	470
6. U. S. Population (millions)	—	144	108.2	132.0
7. Ratio of Beef to Pork price	1.068	1.200	.767	1.827
8. Ratio of Beef to Pork Consumption	.688	.785	.660	1.093

Price and consumption values given in Table II were calculated from the corresponding figures in Table I by using regression lines obtained graphically from 1931-1940.<sup>5</sup> The 1950 real income estimate is consistent with the real income figures used in the author's study and is assumed to be the same as in 1943. (The U.S.D.A. also makes this assumption.) The \$715 per capita was obtained by (1) multiplying the 1941 figure of \$546 by the percentage increase in

<sup>4</sup> Livestock, Meats, and Wool Markets Statistics and Related Data, 1943 U.S.D.A., Washington, D. C.

<sup>5</sup> Graphical analysis was considered accurate enough for this purpose because of the high correlation between the variables used. Following are the formulas used in determining the first four series of Table II: (1)  $y = 1.8 + 1.2x$ , where  $x$  is the beef price received by farmers and  $y$  is the wholesale price of beef steers at Chicago. Both prices are \$s per hundred pounds. (2)  $y = .5 + x$ , where  $x$  is hog price received by farmers and  $y$  is the wholesale price of hogs at Chicago. Both prices are \$s per hundred pounds. (3)  $y = .5 + .87x$ , where  $x$  is the consumption of beef and veal and  $y$  is the consumption of beef. Both series are pounds per capita. (4)  $y = 2.6 + .8x$ , where  $x$  is consumption of pork and lard and  $y$  is consumption of pork. Both series are pounds per capita.



the U. S. Dept of Commerce total wage and salaries index from 1941 to 1943, (2) dividing by the percentage increase in the National Industrial Conference Board cost of living index from 1941 to 1943, and (3) dividing by the percentage increase in population from 1941 to 1950, assuming, as did the U.S.D.A., that the population in 1950 would be 144 million as compared to 132.8 million in 1941.

A comparison of the various 1950 estimates with the past figures given in Table II reveals that all the estimates are relatively high except the beef-pork price and consumption ratios, both of which are well within the range of these ratios for the 1921-1940 period.

#### *Consistency of 1950 Estimates of Price and Consumption Ratios*

In the previous section it was shown that the beef-pork price and consumption ratios were reasonable in that they were within the range of such ratios during the period from 1921-1940. However, there is a question as to the consistency of these ratios with one another because they are not independent variables. If, for example, the beef-pork price ratio is relatively low, then the beef-pork consumption ratio will tend to be high to the extent that the consumer substitutes beef for pork. In his study,<sup>3</sup> the author has derived relationships based on 1900-1941 data which can be used to estimate consumption ratios consistent with given price ratios. These formulas are applied in the following discussion to check the consistency of the beef-pork price and consumption ratios based on the U.S.D.A. estimates. The three relationships used are:

- (1)  $\log X_0 = -.095 + .00526X_1 - .563 \log X_2$ .
- (2)  $\log X_0 = -.094 + .00512X_1 - (1.670 - .429 \log X_6) \log X_2$ .
- (3)  $\log X_0 = -.062 + .00430X_1 - .460 \log X_2 + .390 \log X_3$ .

In the above equations<sup>6</sup>  $X_0$  is the beef-pork consumption ratio.  $X_1$  is a linear time trend; the integer 0 corresponding to the year 1921 and the integer 29 corresponding to the year 1950.  $X_2$  is the beef-pork price ratio,  $X_6$  is real per capita income and  $X_3$  is the beef-pork consumption ratio of the previous year.

<sup>6</sup> These equations are based on 1921-1941 data. In the author's paper,<sup>3</sup> the regression coefficients of these equations are given in Table III on page 70, the coefficients of equation (1) being given in row 12, those of equation (2) in row 14 and those of equation (3) in row 7.

Table III gives beef-pork consumption ratios calculated by means of the above equations, using the beef-pork price ratio of 1.2 (based on U.S.D.A. estimates). Also the table compares the calculated consumption ratios with the consumption ratio based on the U.S.D.A. 1950 estimates. Since the first calculated consumption ratio in Table III was obtained by using equation (1), it takes into account only the price ratio, 1.2, and an upward linear trend in the consumption ratio. The second value, 1.04, calculated by using equation (2), is based not only on the price ratio and trend but also on income. In equation (2) the price ratio elasticity of the consumption ratio is considered a function of income. According to this equation when income is high, this elasticity is low, that is price does not influence consumption as much as when income is low. Thus, using the relatively high real income of \$715 in equation (2), the elasticity (coefficient of  $\log X_2$ ) becomes  $-.450$  as com-

TABLE III. A COMPARISON OF CALCULATED BEEF-PORK CONSUMPTION RATIOS WITH THE U.S.D.A. 1950 ESTIMATE

(1)	(2)	(3)	(4)	(5)
Equation used	Calculated consumption ratio	Consumption ratio based on U.S.D.A. estimates	Discrepancy (3) ÷ (2)	Discrepancy (in standard deviations)
(1)	1.01	.785	.777	-1.8
(2)	1.04	.785	.755	-2.2
(3)	1.10	.785	.714	-2.4

pared to  $-.563$  in equation (1). The last value in column (2) was obtained from equation (3) which takes into account the influence of price, trend and the consumption ratio of the previous year. The figure 1.10 was obtained by assuming that the consumption ratio of 1949 would be the same as in 1950. All the consumption ratios calculated as being consistent with the price ratio 1.2, based on U.S.D.A. estimates, are high as compared with the consumption ratio of .785 based on U.S.D.A. estimates. According to column (4) the biggest discrepancy shows the consumption ratio based on U.S.D.A. estimates to be 71.4% of the consumption ratio consistent with the assumed price ratio. Column (5) of Table III gives values based on a comparison of the discrepancies with the fluctuations in the consumption ratio during the 1921-1941 period.

These figures were obtained by taking the difference in the logarithms of the calculated consumption ratios and the ratio based on U.S.D.A. estimates and dividing this difference by the standard deviation of the logarithms of the consumption ratio in the 1921-1941 period.

### *Conclusions*

On the basis of the above analysis it would appear that the combination of the four beef and pork consumption and price estimates given by the U.S.D.A. is not a likely combination. If the U.S.D.A.'s estimates of the beef and pork prices became a reality then one would expect more beef to be consumed (in relation to pork) than the consumption based on U.S.D.A. estimates. It should be emphasized that the above analysis indicates merely that the combination of consumption and price estimates is an unreasonable combination. It does not indicate which individual estimate or estimates are out of line. In order to get this kind of information it would be necessary, and should be possible, to re-examine the procedure used in determining the individual estimates. The author believes that an analysis based on the relationships between relative quantities and prices (also other economic variables) is an effective way of checking on the reasonableness of a combination of estimates. This analysis considers a combination of four estimates. The same procedure could be applied to a larger set of estimates with the added possibility of converging on the most unrealistic estimate or estimates through a treatment of different combinations of related variables.

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## REVIEWS

*Agricultural Price Control*, Geoffrey S. Shepherd. Ames, Iowa: The Collegiate Press, Inc., 1945. Pp. vii, 361. \$3.75.

For over a decade and a half the federal government has been engaged in a series of large-scale experiments designed to control the prices of farm products. Prior to 1942 these experiments were directed exclusively at raising prices above the levels that would otherwise have prevailed in order to increase the incomes of farmers. Programs designed to keep prices of agricultural products down for the purpose of protecting consumers are a war phenomenon, and are likely to be abandoned as soon as the danger of post-war inflation is past, if not before. Thereafter any governmental controls of agricultural prices that are undertaken will again be directed at the establishment of price floors rather than at the fixing of price ceilings. In this book Professor Shepherd's main concern is with price supports. He explains the major price-supporting programs which have been undertaken in this country and appraises their effectiveness.

The book contains 29 chapters grouped under four headings: (1) stabilizing agricultural prices by controlling the market supplies of farm products; (2) stabilizing agricultural prices by controlling the demand for farm products; (3) local and regional programs for controlling market supply and demand; and (4) the problem of controlling agricultural prices after World War II.

In the final chapter Shepherd sets up eight propositions concerning agricultural price controls which he feels are warranted by his analysis of past experiments. The more important of these propositions are: (1) "storage programs, which merely put products into storage at one time and take them out at another, can stabilize prices but cannot raise their level over a period of years"; (2) "agricultural prices . . . can be raised or lowered over a period of years only by operations which control agricultural production, or the demand for farm products, or both"; (3) "efforts to raise agricultural prices by reducing agricultural production have not borne much fruit, and if they had succeeded, they would not have had much effect on farm income"; (4) "efforts to control agricultural prices by controlling the demand for agricultural products have borne some fruit"; and (5) "agricultural price

control is a dangerous tool, but probably it will continue to be employed."

Shepherd not only believes that government will continue to exercise substantial control over agricultural prices, but he also believes that government should do so, despite the dangers involved. He maintains that agricultural economists "would render better service to farmers by advising them how to control prices than by advising them to leave prices alone." A third alternative, not mentioned by Shepherd, would be for agricultural economists to develop methods of improving the operations of the competitive market for agricultural products.

The fundamental basis of Shepherd's contention that government should control agricultural prices is that "agricultural prices left to themselves are inherently unstable," and that this instability is "a major disturbing force in agriculture." Free market prices for agricultural products, he admits, work out all right in the long run. His complaint is that they work poorly in the short run; i.e., they are "unable to regulate agricultural production and consumption satisfactorily." The "fluctuations in prices . . . lead to uncertainty in farmers' plans for production, thus increasing costs and reducing production. They lead also to speculation in land during booms and severe hardships and disruptions during depressions."

The fluctuations in prices, as Shepherd points out, are caused both by changes in supply and by changes in demand. And these price fluctuations are intensified by the inability of farmers to adjust production promptly to changes in demand.

The principal device which Shepherd would use to stabilize prices against fluctuations in supply is government administered forward price floors. These price floors would be announced in advance of planting or breeding, and would be set at the level at which, in the judgment of the price-fixing authority, an average-weather crop would all move into consumption. However, only in the case of feed crops, such as corn, would the announced price floor be a firm one. On all other crops a schedule of price floors which varied inversely and proportionally with the actual outturn would be used.

In the section on "Stabilizing Agricultural Prices by Controlling the Demand for Farm Products" Shepherd discusses the various subsidy programs designed to increase consumption, such as the

school lunch program, the low-cost milk program and the food stamp plan. He correctly points out that "the fundamental way to stabilize prices against fluctuations in demand is to stabilize the demand," and that this "involves stabilizing the whole national and international economy." But if general stabilization cannot be attained, he argues that specific measures for subsidizing the demand of farm products are needed.

Marketing agreements for milk and for fruits and vegetables are analyzed in Part III. This section is based almost entirely upon the published work of others. It provides a good introduction to the subject.

In the final section Shepherd examines the problems likely to confront the government in carrying out the agricultural price commitment authorized by the Steagall amendment and related legislation. He visualizes that "agricultural prices are likely to decline severely" before the end of the commitment period. He does not hold out much hope that such declines can be prevented by measures designed to reduce the supply of farm products. He has more confidence in measures designed to increase demand, but these, he says, may prove to be very costly, and in addition may tend to perpetuate the over-expansion of production relative to normal peace time demands. He thinks that revisions of existing price-support legislation may be necessary, and he offers several suggestions.

Shepherd next raises questions concerning agricultural price policies after the transition period from war to peace. "Are parity prices . . . workable goals for agricultural price controls? . . . If not, what objectives can be adopted in place of parity prices?" His answer to the first question is no. He would abandon parity prices, but not price controls. He would employ forward price floors for the purpose of getting farm products produced and moved into consumption in proper quantities, subsidized consumption programs for the purpose of assuring adequate nutrition, and direct payments to farmers in periods of depression for the purpose of supplementing their incomes. Also as a long run measure he would encourage the emigration of people from agriculture.

This book is a valuable contribution to the growing literature on government administered prices of agricultural products. Shepherd's descriptions of past control programs are concise and accurate, and his appraisals of their effects upon farm prices and returns are, I think, essentially correct.



One of the important aspects of agricultural price control which Shepherd does not cover at all adequately, however, is the effects of the various programs upon national income and employment. The Agricultural Adjustment Act of 1933 was conceived by its sponsors not only as a means of increasing farm prices and incomes, but also as a positive contribution to national recovery. It is not improbable that the "national income" argument will continue to be used as a justification for agricultural price controls. The inclusion of a careful objective analysis of this argument would have added significantly to the value of Shepherd's book.

My major disagreement with Shepherd's positive proposals relates to forward price floors. Space does not permit a detailed statement of my own views on this subject, nor is a book review the proper place to present them. Suffice it to say here that I feel Shepherd has exaggerated the advantages and minimized the disadvantages of forward price floors for agricultural products. They are not without merit, but for the time being I would view them simply as an intriguing hypothesis.

H. R. WELLMAN

*University of California*

*Land Tenure in the Colonies*, V. Liversage. Cambridge: The University Press, 1945. Pp. ix, 151. \$2.00.

The prospect is that agricultural economists in this country will in the future be giving increased attention to rural problems on an international scale. If so, it probably will be found that few questions are more widespread than those of land tenure and that these problems demand greater emphasis elsewhere in the world than they receive here. Mr. Liversage's new book, for example, is keynoted by the observation that "A close correlation will be found everywhere between contemporary social and political institutions and land tenures." "In all societies the relation between the people and the land they occupy and exploit is a matter of the greatest interest and moment." In expressing this point of view, Mr. Liversage (an agricultural economist in Kenya) stands on the same ground as Professor Ashby of Wales and other British Empire scholars who have noted the fundamental importance and universality of land tenure issues.

*Land Tenure in the Colonies* represents a quick glance at land tenure problems in various countries, constructed by a splicing of scattered comments and conclusions from the reports of many

investigators, and focused on tenure problems in colonial territories. Despite its breadth, however, the book is brief and modest: the author himself makes clear that he has made "No attempt . . . to produce a work of erudition."

If Mr. Liversage's book is not erudite, it is still valuable because of its sweep and its argument. In a work of this kind, there are bound to be some points which are insufficiently developed; American land economists will be puzzled, for example, by the weight given to reports of fragmentation in this country. On the other hand, there is much to be learned by watching Mr. Liversage spin the globe from Algeria to Zanzibar by way of Cyprus, Isle of Axholme, and Tanganyika on a single topic such as farm indebtedness in the short space of 24 pages. Also, those who have concentrated on the problems of one area gain by having an outside expert set those problems alongside information from a host of other countries. While the divergencies are noteworthy, it is the similarities which may startle the reader in this country.

The book is organized along an important line of reasoning. There are two broad tenure categories: customary and contractual. Tribal and feudal tenures are forms of customary tenure which is characteristic of primitive societies. There are five forms of contractual tenure: labor tenancy, share tenancy, cash tenancy, emphyteusis, and owner-occupation. Brief discussions of all these tenure forms comprise the first eight chapters of the volume.

In the next three chapters, Mr. Liversage shows that in colonial areas customary tenures are passing over to contractual tenures, and he gives the arguments advanced in favor of the transition to the freehold. He also points out, however, that the dangers in the new system inhere in the overcapitalization of land values and the fixation of a high debt structure upon a fluctuating income base. Mr. Liversage then reviews the subdivision, fragmentation, and farm indebtedness problems which have marred the record of freehold tenure, and he summarizes the weaknesses of owner-occupation and the remedies which have been tried (without much success) to overcome them.

The final chapters describe some land tenure experiments, under the title "Modern Policy." Finding unrestrained owner-occupation and tenancy both wanting, Mr. Liversage first looks for examples of restrictions on the rights of owners as occupiers or as landlords, and he cites instances in England and in parts of South Africa,

British Guiana, and India. Turning to usufructuary occupation without private ownership, Mr. Liversage uncovers numerous African examples; but he puts emphasis on the Kingolwira scheme in Tanganyika and (as Leake did in his tropical land tenure studies) on the Gezira scheme in the Anglo-Egyptian Sudan. He reveals the elements of weakness in these tenure experiments but concludes that they at least show that there is some possibility of finding a middle course between the "choice of evils": land nationalization vs. "individuality run riot."

This little book is timely and most welcome. Even the American agricultural economist who disavows interest in colonial problems should read this volume, if only to see what a colonial expert finds, or fails to find, in advanced land tenure systems that can be recommended to the millions of people who are standing on the threshold of modern civilization.

LEONARD A. SALTER, JR.

*University of Wisconsin*

*Big Democracy.* Paul H. Appleby. New York: Alfred A. Knopf, 1945, Pp. x, 198. \$2.75.

Like sin, everyone is against "bureaucracy." But Mr. Appleby—Assistant to Secretary Wallace 1933-40 and Under Secretary of Agriculture 1940-44—frankly and openly espouses the Devil's cause. The American people are strongly addicted to the belief that Rulers of the Queen's Navee are indeed made by "polishing up the handle of the big front door." To most, therefore, the first reaction to this book will be that Appleby, like the Lord Chancellor, is saying:

"The Law is the true embodiment  
Of everything that's excellent.  
It has no kind of fault or flaw,  
And I, my Lords, embody the Law."

Upon more careful and thoughtful reading, however, the reviewer must concede that Mr. Appleby's position is at least less partisan than the emotional anti-bureaucratic shibboleths and symbols to which we Americans are so accustomed. This book should be read in conjunction with the excellent companion-piece in the same Borzoi Book series, Roland Young's *This Is Congress*. While Appleby is less scholarly and critical than Young, both have a common ability to bring to the reader an insight which can come

only from intimate observation of, and personal participation in, the governmental process.

To Appleby, "bureaucracy" is the governmental *system*, which can be understood only "in terms of the public employees themselves, their conceptions of their positions, and the attitudes of the public about what is required in and from our civil servants" (p. 3). Government exists because certain people must be "charged with the function of promoting and protecting the public interest." As a result, its breadth of scope, public accountability and political character differentiate it from all other institutions (p. 6). Since we have big government and are going to have bigger government, we cannot simply throw in the sponge at its complexity. Rather, we must find means by which our increasingly specialized society may be synthesized, motivated in that spirit and using those techniques which are in harmony with our ideals of individual freedom (p. 27).

Much of Appleby's discussion emphasizes the view that a bureaucrat's "life is not a happy one." He belittles the dangers of arbitrary use of power by administrative officials, so bright is the light of publicity and so many the pressures and counterpressures to which they are continuously subject. "The average 'high official' is so conscious of the restraints and limitations under which he is obliged to function that his strongest impression is likely to be that of a very restricted power. Indeed, this sense of a lack of power is what drives people out of Washington" (p. 38). Except in the very limited doses necessary to capture the public imagination, the prima donna is out of place in a governmental system, which must produce "an organized product, an institutional product," not a personal and arbitrary one (p. 83). Redtape, though much maligned, is really the means of organizing the channels of the governmental process, thereby achieving "relative simplification" (p. 64) and consistency in applying general rules to particular cases (p. 32).

Appleby convincingly argues—contrary to recent Court decisions—that a department secretary "needs to give matters organizational attention rather than personal attention. He is responsible, and he should be responsible, chiefly for *the way in which such matters are handled* rather than for the handling of specific actions" (p. 71). Hence the necessity and wisdom of delegation of powers

if decisions are to stand close public scrutiny (p. 32). Because of the underlying stability of bureaucratic organization, policies, and programs, the influence of new Cabinet members is much more "mild and moderate" than the public generally believes (p. 106). This is the more true, the more the incoming secretary buries himself in detail and bucks the organized way of doing things. Operational problems should be largely delegated, since Cabinet members need above all to be "managerial, philosophical, political generalists" (p. 76), providing the broad policy stimuli by which bureaucratic organizations may be kept dynamic. The same principle applies, though in diminishing degree, as one descends the administrative hierarchy (pp. 65-77).

Throughout, Appleby compares big government and big business, invariably to the detriment of the latter. One may agree with him that the narrowly-focussed training and environment of most mature business men is apt to unfit them for broadly-oriented public service (pp. 3-6). Furthermore, private business does have its own bureaucracy, with many of the problems which public bureaucracy entails (pp. 59-61). As Gordon recently pointed out,

"the bureaucratic tendencies inherent in large-scale 'business' organization . . . impair management efficiency, . . . create inflexibility of operation and some resistance to change, and . . . increase the strain placed on the personal and leadership qualities of the chief executive. . . . Among some professional executives, scientific caution may degenerate into a tendency to play safe. They do not receive the profits which may result from taking a chance, while their position in the firm may be jeopardized in the event of serious loss."<sup>1</sup>

These shortcomings are strikingly similar to those which Appleby concedes as difficulties to be overcome in large-scale *governmental* organization (pp. 32-33, 104-105, 129-130, etc.). But these very similarities make his favorable comparisons of government *vis-à-vis* business as one-sided as the unfavorable comparisons which industrial interests (and the general public) are prone to make. Thus, he asserts that, because of political sentiments and pressures, "persons in government . . . reach out for authority somewhat more reluctantly than do executives in private business" (p. 84). And he considers it "not likely" that "a bureaucrat [will] be as

<sup>1</sup> Robert A. Gordon, *Business Leadership in the Large Corporation*, Brookings Institution, Washington, 1945, pp. 322-323 and 324.

much concerned for his interest as a bureaucrat as a businessman is concerned for his profit" (p. 31).

The reviewer remains skeptical. While the "sense of a lack of power" may drive some from Washington, it may challenge others—more adept and willing to play the "power game" for its own sake, without regard for the public interest—to stay. Certainly there have been important instances of this kind in the wartime deterioration of the administrative personnel and organization of the Department of Agriculture, which Appleby apparently feels is (or was) bureaucracy at its best. The problems of bureaucracy, whether public or private, are largely a function of size. Hence, the fact that, "in relation to the United States government even the largest corporation is small and simple" (p. 9), supports a fairly general presumption in favor of the greater efficiency of private enterprise, Appleby's objections notwithstanding (pp. 48-56). This is not to deny, however, that much of economic enterprise, to remain private, must harness that efficiency in the public interest more fully than it has as yet done.

The author's treatment of the important question of the relations between the executive and legislative branches (pp. 156-168) is disappointingly sketchy. The reviewer agrees that Congress needs to "treat its power more as an ultimate power and less as a devising and minutely, directly controlling power" (p. 168). But, so convinced is the author that our present bureaucracy is already fully accountable to the public, that he fails adequately to recognize (as do most bureaucrats) that Congress must be concerned with how its broad delegations of authority are used. Congressional hamstringing of administration results not only from the absence of appropriate machinery by which Congress may exercise continuous but constructive control of administration, but also from a tendency for administrators to stretch unconscionably the limits of their statutory authority more often than Appleby is willing to admit.

Every reader will find Appleby's discussion of still other subjects—for example, centralization and decentralization (pp. 84-104), the recruitment of personnel (pp. 113-115), and patronage (pp. 144-156)—penetrating and provocative. This book is "must" reading for many who dwell in the Harold-built marble halls and jerry-built "temporary" annexes of Washington. The "bureaucrats" of the nation's public colleges and universities will also find



much of interest and value in Appleby's personal insight into the Do's and Don'ts of public administration.

Whether we like it or not, it is clear that Bureaucracy is here to stay. Our first concern should, therefore, be to make it work better. This is Mr. Appleby's primary objective, and to that end he has made what is, on the whole, an acute and original contribution.

WILLIAM H. NICHOLLS

*University of Chicago*

*Latin America in the Future World*, George Soule, David Efron and Norman T. Ness. New York: Farrar & Rinehart, Inc., 1945. Pp. xiii, 372. \$3.50.

*Latin America in the Future World* is a very interesting document, interesting for two reasons: First, because of the information it contains, and, second, because of the thesis which it attempts to maintain and demonstrate. It compiles some information which the reader would find great difficulty in obtaining from other sources. Its thesis is that on the basic statement of the aims of the United Nations there "must be erected a structure which accords" with "the letter and spirit" of those aims; that "action is necessary" and this book attempts to present what that action should be. The authors state at the outset that:

"This book deliberately seeks out, not what is right but what is wrong, in order that what is wrong may be made right." (p. 3)

Part One, "The Basic Problem Described and Analyzed," covers the problems of "purchasing power," "nutrition," "housing and sanitation," "health," "geographic, cultural and land problems," "land ownership in selected countries," "social and political status of labor," and "the pattern of economic activity." Facts concerning each of these problems, in terms of comparative statistical data, are presented on all Latin American countries, wherever such data are available. Wherever quantitative and comparative data are not available descriptive materials concerning as many of the countries as possible are presented. These descriptive materials are necessarily spotted. In some cases their representativeness may be questioned. Because the purpose is to seek out what is wrong they are automatically unrepresentative in some ways.

Part Two, "War: Economic Dislocations and Programs," includes some things which are not necessarily a result of the war, such as improvements in food, health, housing, education and

social security programs, land reforms, etc. It gains in value by not being completely true to the thesis of pointing out sore spots but by presenting many of the constructive programs which are being carried on in these countries.

Part Three, "Recommended Policies and Implementation," is an exposition of economic doctrines, which might just as well be related to the economy of other nations as those of Latin America. Their essence is that the future depends upon an expanding economy—both production and consumption—throughout the world; that the western hemisphere is a part of the world and Latin America a part of the western hemisphere; and that "rapid and sound (postwar) recovery depends largely on the success of the United States and Great Britain in maintaining full employment and an expanding economy within their own boundaries." The application of these doctrines to Latin American countries and to relationships between them, the United States, and other countries, is made clear on such issues as tariffs, national self-sufficiency, and regional or continental self-sufficiency.

The relationship of the economic plans and policies stated in Part Three to the information and discussion of weak spots in Latin America, presented in Part One, are not made too clear. One is inclined to suspect that these two Parts were written by altogether different authors. Certainly they are on very different planes of scholarship and, furthermore, the discussion in Part Three deals more with potentialities than with weaknesses.

The final chapter, on "Proposed Institutional Arrangements," suggests "planning agencies of various sorts and at various levels"—local, regional, national and international; "Development Corporations," "Valley Authorities," "an International Labor Standards Agency," "Commodity Agreements," "an International Trade Corporation," and "Cooperation Among these Agencies." It does not wrestle with or even give consideration to the problem of creating an enlightened public opinion in Latin American countries as an essential prerequisite to the operation, or even establishment, of these many agencies. Maybe this is thought to be a different problem. I doubt it. It is that part of planning without which even the soundest of economic doctrine is utopian or even distasteful to those whose participation is required to guarantee that planning shall be translated into action.

CARL C. TAYLOR

*U. S. Dept. of Agriculture*

*Food Regulation and Compliance*, Volume I, Arthur D. Herrick, New York. Revere Publishing Company, 1944. Pp. xvi, 646. \$10.00.

Mr. Herrick's objective . . . "to present the legislation affecting foods and their marketing comprehensively and in such a manner as to enable the producer and distributor to understand and to apply these statutory requirements to his particular products" has been well met. Written primarily for producers and distributors, this comprehensive, well-annotated reference work provides a valuable description of present laws, interpretations and administrative rulings pertaining to the regulation of foods and food products.

The professional economist would welcome additional evaluation of food regulation in terms of reasons for it, its accomplishments in the past and the major issues and problems that have been raised as a result of new and revised laws. He will realize, however, that the author's principal purpose has been to prepare a manual on food regulation and how to comply. This he has done well. The book gives careful attention to every phase of the regulation of food products, and in language that is understandable to the trade it provides information on how to comply with requirements concerning acceptable labeling, packaging, advertising, distributing and purchasing of food products. In addition to meeting its basic purpose of providing the trade with a manual on food regulation, this volume should serve as a valuable reference book for all students of processing, marketing and distribution. It provides, in one volume, descriptions and numerous examples of compliance and violation for more than 30 statutes relating to meats, milk, fruits, tea, dairy products, containers, unfair competition, grade standards and foods in general.

The first chapter deals with early legislation in the field of food control. Numerous state and miscellaneous federal statutes preceded the entry of the Federal government into comprehensive control and regulation of foods with the passage of the *Federal Food and Drugs Act of 1906*. For 32 years this Act, with the seven amendments and 40 rules and regulations added during this period, . . . "served as the principal protection of the American people against adulteration and misbranding in such products."

The second chapter recounts the efforts and difficulties encountered by proponents of pure food and drug legislation in attempting to broaden and extend the scope of the Act of 1906.

The new . . . "*Federal Food, Drug and Cosmetic Act*, after a bitter legislative history, became the law on June 25, 1938." Although this Act . . . "represents a definite advance in the regulatory authority of the Food and Drug Administration, nevertheless, many provisions . . . of the *Federal Food and Drugs Act* may be recognized in the new law." Among the new provisions that were added were the prohibition of the production of food under insanitary conditions; the regulation of foods dangerous to health because of naturally contained poisons; the establishment of tolerances for poisons added unavoidably in food production; definitions of standards and identity, of quality and of fill of container; informative labeling; and the prohibition of slack filling of containers and use of deceptive containers. "Indeed it is not too much to say that the regulation imposed by the statute has radically transformed the entire marketing of food products."

"It will be noted that this work has been generally developed about the framework of the *Federal Food, Drug and Cosmetic Act* . . . the principal statute concerned with food regulation in the United States." "Other statutes, generally speaking, serve merely to complement its provisions."

Other important federal food statutes covered include the *Federal Meat Inspection Act* with its several extensions and amendments, the *Export Apple and Pear Act*, *Apple Standards Act*, *Federal Alcohol Administration Act*, *Import Milk Act*, *United States Grain Standards Act*, *Plant Quarantine Act*, *Livestock Quarantines*, *Twenty-eight Hour Law*, *United States Public Health Service*, *Federal Filled Milk Act*, *Special Tea Inspection Act*, *The Perishable Agricultural Commodities Act*, *United States Warehouse Act*, *Oleomargarine Statutes*, and *Adulterated, Renovated or Process Butter*, *The Federal Filled Cheese Act*, *The Federal Trade Commission Act*, *The Standard Barrel Act*, *The Standard Container Act of 1916*, *The Standard Container Act of 1928*, *State legislation* and the relation of the above to the *Food, Drug and Cosmetic Act*.

The remaining chapters deal primarily with an extension of the discussion of legislation as it affects producers, processors and distributors. Much detail and many illustrations are provided together with an attempt to delineate the principles upon which decisions are made. The remaining chapter headings indicate the form taken by this discussion: *Foods Subject to Regulation*, *Misbranded Food Products*, *Labels and Labeling*, *False and Misleading*

Representations, Food in Package Form, Name and Address of Sponsor, Net Contents of Package, Imitations and Fraudulent Products, Food Standards and Definitions, Food Grade Standards, Violation of Food Standards, Unstandardized Food Products, Common or Usual Name, Statement of Ingredients, Special Dietary Foods, Chemical Preservatives, Artificial Flavoring and Artificial Coloring, Label Display and Prominence, Deceptive Packaging of Foods and Labeling Exemptions.

MARK T. BUCHANAN

*State College of Washington*

*Fertilizers in the Postwar National Economy.* Washington: National Planning Association, Planning Pamphlet No. 42, 1945. Pp. 48. \$1.25.

*A Food and Nutrition Program for the Nation.* Washington: National Planning Association, Planning Pamphlet No. 46, 1945. Pp. 35. \$.25

"Fertilizers in the Postwar National Economy" is a report by the Agriculture Committee on National Policy of the National Planning Association. This Committee, of which Theodore W. Schultz is Chairman, is made up of a representative group of agricultural economists and leaders in industry and agriculture. The report concerns itself principally with a review of the relation of fertilizer to soil fertility and the national welfare. The report does nothing much more than bring together in summary form things that are common knowledge among persons familiar with the current problems of modern technical agriculture and its relation to the national economy. A review of the plant food content of United States soils reveals that they have highly variable requirements for Nitrogen, Phosphorus, and Potash and that, in general, Nitrogen and Phosphorus deficiencies are more pronounced than deficiencies in Potash. Fertilizers are effective in correcting deficiencies in soil fertility and in reducing soil erosion. The demand for fertilizer is closely related to farm income. It was estimated that with a postwar farm income of four billion dollars fertilizer expenditures would be 218 million dollars. Whereas, with a postwar income of eight billion dollars fertilizer expenditures would be 432 million dollars. Ample supplies of Nitrogen fertilizer appear to be in prospect from by-product sources and through continual development of scientific Ammonia and Nitrogen fixation

processes. There are abundant natural supplies of Phosphates in the United States, the United States having about one-half of the world's known deposits of Phosphate rock. Our indicated reserve would last more than two thousand years at our present rate of consumption. While American soils contain about fifteen times as much Potash as Nitrogen or Phosphoric acid, Potash deposits in United States are very small. Known reserves are less than two percent of the world's reserves and constitute about one-hundred years' supply at the current rate of production. The report recommends free trade in fertilizer and fertilizer constituents. The report recommends the importation of a substantial portion of our Potash requirements.

The report was obviously written by persons more familiar with the technology of fertilizer and with the fertilizer trade than with the economic problems involved. One of the most interesting features of the report is the numerous footnotes credited to the agricultural economists on the Committee. These footnotes, when taken together, amount to a minority report by the economists who participated.

"A Food and Nutrition Program for the Nation" is a joint report prepared by sub-committees of the Committees on Agriculture, Business, and Labor of the National Planning Association. This report reviews the problem of food and nutrition in connection with individual and national welfare in the United States and proposes a food nutrition program for the nation. To one who is unfamiliar with the technical problems of nutrition it appears to be not much more than a restatement of problems and issues which have been before the public in one form and another during the last decade. The report suggests that persons in the low income brackets find difficulty in providing themselves with ample supplies of healthy foods. Much of this failure, however, can be traced to ignorance rather than to lack of resources. Adequate data showing the actual extent of nutritional deficiencies appear to be lacking. The report takes the position that in a free country people should be free to eat what they want to eat but that it is a public responsibility to supply consumers with needed facts and to guard them against misinformation. The major part of the problem of nutrition in the United States appears from this report to be concerned with education and research. The report suggest that



this educational program can be carried out through consumer's education, particularly by the use of consumers' organizations, labor unions, farmers' organizations, medical societies, producers' organizations, and the extension service. It is a bit surprising to the reader to note that not much appeared to be expected from the public school system. It is suggested that both producers and distributors might well reorganize their business in such a way as to contribute to better nutrition. This would not appear to the reviewer to be a very practical suggestion except in so far as such recommendations might also contribute to the increased profits of the individual producers and distributors. In the opinion of the reviewer this report did little more than call attention to the desirability of developing a comprehensive program of education in this important field. The report would have been improved by the inclusion of material similar to that in the article by George J. Stigler, "The Cost of Subsistence," published in the May, 1945, issue of the *JOURNAL OF FARM ECONOMICS*.

E. C. YOUNG

*Purdue University*

*Price and Related Controls in the United States*, Seymour E. Harris.  
New York: McGraw-Hill Book Company, 1945. Pp. xx, 392.  
\$4.00.

This book is a description, analysis, and appraisal of the operations of the OPA.

The author is able to write about price control on the basis of first-hand experience. He was Director of the Office of Export-Import Price Control in 1942 and 1943. Several of the chapters in the book are based upon chapters which the author originally wrote for the OPA Manual of Price Control.

The author made a heroic attempt, with considerable success, to organize his inherently heterogeneous material into systematic form. The book is divided into seven parts: Introduction and Summary, General Aspects of Price Control, Techniques, Some Case Studies, Special Problems, Related Controls, and The Future of Price Controls.

The style is clear, the analysis is based upon well documented statistics and charts, and the appraisal appears to the reviewer to be sound. Students of price control will owe as much to Harris for

this report as they do to Frank M. Surface for his reports on food price control during World War I—perhaps more, for Harris' book is more analytical in character.

The author reaches several conclusions: Price control has worked remarkably well, as shown by comparing prices and production in World Wars I and II. This has saved the government and consumers much money. The cost of living during the first 53 months of World War I (July 1914 to December 1918) rose 64.6 percent, while during the first 53 months of World War II (August 1939 to January 1944) it rose only 25.9 percent. Yet industrial production more than doubled from 1939 to 1944, the last 40 percent of this rise occurring after comprehensive price control was instituted in the early part of 1942 (during World War I, production increased only 25 percent). Price control has not hurt business, for corporate profits before taxes rose from \$5 billion in 1939 to \$23 billion in 1943, while profits even after taxes rose from \$4 billion to \$9 billion. And finally, in the future the main objective must be to eliminate price control as soon as possible—that is, as soon as the demand and supply situation permits.

Books like Harris' are valuable complements to economic theory. Theory shows how our economy works; it thus indicates how, when necessary, the economy can be controlled. Harris' book is like a laboratory or factory report. It shows how the controls actually worked out, and how the problems of putting principles into practice were solved. Both theoretical and applied economists can benefit from study of books of this kind.

GEOFFREY SHEPHERD

*Iowa State College*

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## NEWS NOTES

The election of officers for the 1945-46 year in the Western Farm Economics Association was completed in September. Dr. George W. Barr moves to the Past-Presidency, and Dr. Marion Clawson was elected to the Presidency. Dr. C. O. Youngstrom of Boise, Idaho was elected Vice-President. The newly elected officers take office October 1.

The staff of the Food Research Institute, Stanford, under grant of funds from the Committee for Economic Stability, is engaged upon an appraisal of the commodity-reserve currency proposal as advanced in Graham's *World Commodities and World Currencies*. The appraisal is to be completed by August 1946.

Martin A. Abrahamsen has accepted an appointment as Agricultural Economist and Professor of Agricultural Economics at North Carolina State College of Agriculture and Engineering effective October 1, 1945. Professor Abrahamsen will have charge of all work connected with marketing research and teaching.

Thurston M. Adams has been appointed chairman of the Department of Agricultural Economics at the University of Vermont.

L. J. Atkinson has transferred from the Division of Farm Management and Costs to take up work in the United States Department of Commerce on the Survey of Current Business.

R. W. Bartlett, who has been spending the greater part of his time during the past year with the Bartlett Foundation, a research agency working primarily in the field of milk marketing, will return to the University of Illinois on practically full time during the coming year. He will, however, continue to give some attention to the work of the Foundation.

Frank D. Barlow, Jr., Associate Professor and Associate Agricultural Economist in the Department of Agricultural Economics, Louisiana State University, was given military leave on August 14 for the purpose of entering the U. S. Army.

Merrill K. Bennett has been appointed dean of the School of Social Sciences at Stanford University. He will continue as Executive Director of the Food Research Institute.

Russell W. Bierman, Division of Farm Management and Costs, has begun his academic year as Littauer Fellow in the Graduate School of Public Administration at Harvard University.

Grant E. Blanch resigned position of Assistant Economist, Marketing, in the South Dakota Agricultural Experiment Station to accept position of Associate Professor in the Department of Farm Management, Oregon State College, appointment effective November 1, 1945.

J. Carroll Bottum, Assistant Chief in Agricultural Economics Extension at Purdue University, is on leave of absence for one year, ending June 30, 1946, to serve as economic advisor and analyst for the American Farm Bureau Federation in Chicago. In this position he is working with Dr. T. K. Cowden, also formerly of Purdue.

Karl Brandt, Economist and Professor of Agricultural Economics in the Food Research Institute, Stanford University, served the War Food Administration to June 1945, and subsequently the Foreign Economic Association, Office of Food Programs and The Food and Agriculture Division of the Enemy Branch, as a consultant.

Philip L. Breakiron, formerly Marketing Specialist, War Food Administration, has transferred to the Division of Marketing and Transportation Research, Bureau of Agricultural Economics, as Transportation Economist.

E. L. Burton, Agricultural Statistician of the Dominion Bureau of Statistics, has joined the staff of the Department of Farm Management at the University of Saskatchewan.

James P. Cavin, Associate Head, Division of Statistical and Historical Research, has returned to the Division after four months in Europe with the U. S. Strategic Bombing Survey.

A. H. Chambers, Assistant Agricultural Economist, Tennessee Agricultural Experiment Station, is spending six months in West Tennessee making a study of cotton marketing in cooperation with the Cotton Division, U. S. Department of Agriculture.

Walter P. Cotton has resigned as Economist for the National Grange to become Director of Economic Research for the Dairy Industry Committee.

H. H. Cutler of the Department of Agricultural Economics, Utah State Agricultural College, has been granted a leave for one year to assist the legislative tax study committee on a tax study for the State of Utah.

John C. Doneth in the Army Air Corps since May 1, 1942 recently received his release from the Military Forces and returned for service as Extension Specialist in Farm Management at the Michigan State College, September 17, 1945.

W. M. Drummond has resumed his former position as Head of the Department of Agricultural Economics, Ontario Agricultural College, after serving for some time as Economic Advisor to the Progressive-Conservative Organization.

A. C. Ellis, former Assistant Professor of Economics at Mississippi State College, was awarded Ph.D. degree in 1944 by University of Virginia, afterwards serving Associate Professor of Rural Economics at Hendrix College, has returned to Mississippi State College as Associate Professor of Economics in Research.

J. William Firor, Sr., who has been on leave for the past three years has returned to his former duties as Head, Department of Agricultural Economics and Rural Sociology, University of Georgia. Major Firor has been making some studies of rural industries for the Georgia State Board of Agricultural and Industrial Development since returning from two years' service with the Army Air Forces.

Delbert R. French, formerly Agricultural Economist, Division of Marketing and Transportation Research, has transferred to the Bureau of Reclamation, United States Department of Interior, as Public Works Economist.

Meyer A. Girshick, Agricultural Statistician, who has been on leave from the Division of Statistical and Research for sixteen months while working on war problems with the Statistical Research Group at Columbia University, is now back in the Division.

Noah Hadley joined the Purdue Agricultural Economics Extension Staff October 1 to assist with the Farm Organization and Farm Accounting activities of the department. For the past several years he has been County Agricultural Agent in Parke County, Indiana.

Lloyd C. Halvorson, formerly of the Economic and Credit Research Division of the Farm Credit Administration, has accepted the position of Economist with the National Grange at its headquarters in Washington, D. C.

H. W. Hannah has been promoted from Assistant Professor and Assistant Chief in Agricultural Economics to Associate Professor and Associate Chief at the University of Illinois. He plans to return from military service about October 1 and will give primary attention to the legal side of agricultural economics problems. As a Lt. Colonel, he saw active service in Europe as Operations Officer of the 101st Airborne Division. He has successfully recovered from serious wounds received in action.

Karl V. Hobson is now on the staff of the regional office at Portland, Oregon, engaged in a cooperative study with the Bonneville Power Administration of the potential production and utilization of agricultural products in the Pacific Northwest during the next ten years.

R. A. Kelly has been promoted from Associate in Fruit and Vegetable Marketing to Assistant Professor and Assistant Chief in Fruit and Vegetable Marketing at the University of Illinois.

Frank P. King, Associate Professor of Agricultural Economics, University of Georgia has been given leave of absence to do graduate study at Cornell University.

William Kling, formerly Agricultural Economist, Division of Marketing and Transportation Research, has transferred to the State Department.



H. K. Leckie of the Economics Division staff at Ottawa, and Statistician for the Canadian Meat Board throughout the duration of the war has resigned to accept a position as Associate Professor of Agricultural Economics, at the Ontario Agricultural College, Guelph. The staff at Guelph has also been enlarged by the addition of K. Kristjanson formerly of the Edmonton office, Dominion Economics Division.

James G. Maddox, Special Assistant to the Chief, returned to the Bureau after spending six months with the Office of War Mobilization and Reconversion, where he was special advisor to Deputy Director Hutson.

W. C. Mitchell has resigned as Director of Research of the National Bureau of Economic Research, after twenty-five years of service. Dr. Arthur F. Burns has been appointed as new director.

J. Lambert Molyneaux resigned his position as Economist in Rural Life, Division of Farm and Ranch Economics, Texas Agricultural Experiment Station, on August 15 to accept a position with the Division of Farm Population and Rural Welfare, Bureau of Agricultural Economics, Washington, D. C. He will be engaged in population research and assumed his new duties on September 1.

Harold S. Morine joined the Agricultural Economics Extension staff of Purdue University, September 1, to assist with the Farm Accounting Extension activity. Mr. Morine did his undergraduate work at the University of Illinois and obtained his Master's degree at Purdue University before entering defense work in 1942.

R. J. Mutti has been promoted from Associate in Marketing to Assistant Professor and Assistant Chief of Marketing. He is giving his primary attention to problems in connection with milk marketing and processing at the University of Illinois.

A. W. Peterson, Associate Agricultural Economist in the Division of Farm Management and Agricultural Economics at the State College of Washington, has been placed on the teaching staff for the current and succeeding school years. He has been given the additional title of Associate Professor.

F. J. Reiss has been promoted from Associate to Assistant Professor and Assistant Chief in Farm Management at the University of Illinois. He is giving his primary attention to summarization and analysis work in connection with the records compiled in the Farm Bureau Farm Management Service.

G. C. Retson, of the staff of the Economics Division, Department of Agriculture, Ottawa who has recently returned from the Canadian army has been granted leave of absence to assist with the rehabilitation program of National Selective Service.

Harold B. Rowe, who has been on leave of absence since September 1940, working first with the National Defense Advisory Commission, then with the O.P.A., then the Office of War Mobilization, and finally the Foreign Economic Administration returned in October to a permanent appointment on the research staff of the Brookings Institution. He will conduct researches on postwar food problems, national and international.

Adolph Scolnick, Agricultural Economist, who has been on military leave, has returned to the Division of Marketing and Transportation Research.

Orlin J. Scoville, Division of Farm Management and Costs, has begun an intensive study of the economic problems of operators of family size farms in the Great Plains States working out of the Bureau's regional office at Lincoln, Nebraska.

Carl Taeusch, Head of the Division of Program Study and Discussion, has joined the Department of Philosophy of the Armed Forces Institute School at Biarritz, France, where he expects to spend from seven months to a year. Alva H. Benton was to have acted in his stead, but the sudden necessity for taking extended sick leave made another interim appointment mandatory, and Peter H. DeVries, Head of the Division of Economic Information, has been made acting head of program study work for the time being.

J. L. Tennant, Head, Department of Agricultural Economics, Rhode Island State College, has been appointed chairman of the State Dairy Industry Reconversion Committee.

Alvin S. Tostlebe who has been with the research staff of the Division of Agricultural Finance from January 1944 to July 1945, has returned to the College of Wooster to resume his duties as head of the Department of Economics.

James D. Toy, Director of Research at the Farm Credit Administration of Louisville, returned to duty from military furlough on September 11.

O. Ulrey, Agricultural Economist at Michigan State College, is on leave for a year for work in the Office of the Chief, Bureau of Agricultural Economics.

George W. Westcott, Extension Professor at Massachusetts State College, is taking a year's leave of absence to study at Harvard University.

Holbrook Working has returned to the Food Research Institute, Stanford University, after an absence of two and a half years during which he was in charge of a program for extending the use of statistical methods of quality control in war industries for the Office of Production Research and Development, War Production Board.

1945 *Annual Meeting*  
of the  
**AMERICAN FARM  
ECONOMIC ASSOCIATION**

will be held at the

**LA SALLE HOTEL  
CHICAGO**

**December 27 and 28**

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The Hotel urges in the interest of accommodating the largest number, that guests arrange when convenient to occupy connecting rooms for three and four persons.

Members of the American Farm Economic Association are requested to register at the Association's registration desk at the La Salle Hotel as soon as convenient after arrival.

Further information will be furnished by letter around December 1.

See preliminary announcement of the program, pages 1014-1016, this issue of the Journal.

**PROGRAM OF ANNUAL MEETING—AMERICAN  
FARM ECONOMIC ASSOCIATION**

**LA SALLE HOTEL, CHICAGO, ILLINOIS**

**DECEMBER 27-28, 1945**

*December 27*

**10:00 A.M.**

**(Century Room)**

1. Research developments in  
Farm finance—F. F. Hill, Cornell University  
Capital requirements for beginning farming—William L. Cavert,  
Farm Credit Administration, St. Paul, Minnesota  
Cooperative marketing—Harold Hedges, Farm Credit Adminis-  
tration, Washington, D. C.  
Sherman Johnson, U.S.D.A., Chairman  
Reviewer: W. G. Murray, Iowa State College

**(Lincoln Room)**

2. Research and educational programs in the marketing of  
Milk and dairy products—Alan McCleod, University of Con-  
necticut  
Livestock—C. D. Phillips, University of Kentucky  
Horticultural products—H. R. Wellman, University of Cali-  
fornia  
G. G. McBride, Ohio State University, Chairman  
Reviewer: G. W. Hedlund, Pennsylvania State College

**(Press Gallery)**

3. Postwar extension problems in agricultural economics  
W. B. Stout, U.S.D.A.  
G. W. Wescott, Massachusetts State College  
Carl Malone, Iowa State College  
O. G. Lloyd, Purdue University, Chairman  
Reviewer: J. E. Crosby, University of Missouri

**2:00 P.M.**

**(Century Room)**

- Postwar-agricultural policy—pressure vs. general welfare—O. B.  
Jesness, University of Minnesota  
Sixty million laborers and six million farmers—F. A. Pearson,  
Cornell University  
Economic patterns and postwar agriculture—T. W. Schultz, Uni-  
versity of Chicago  
E. J. Working, University of Illinois, Chairman  
Reviewer: H. R. Tolley, U.S.D.A.

**5:00 P.M.**

1. Editorial Council (Parlor C)
2. Farm Management Workers' Conference (Lincoln Room)
3. Executive Committee Meeting

8:00 P.M.

(Century Eoom)

## 1. Foreign agriculture and trade problems

Prospects for postwar agricultural exports—L. A. Wheeler,  
U.S.D.A.

The United Nations Food and Agricultural Organization—Gove  
Hambidge, Interim Committee of the Food and Agricultural  
Organization

Educational opportunities and responsibilities in connection with  
foreign agriculture—C. L. Stewart, University of Illinois

T. K. Cowden, American Farm Bureau Federation, Chair-  
man

Reviewer: Asher Hobson, University of Wisconsin

(Lincoln Room)

## 2. Social Security for farm people

I. S. Falk, Social Security Board

K. H. Parsons, University of Wisconsin

W. P. Thomas, Utah State College

Eric Englund, U.S.D.A., Chairman

Reviewer: Norman Wall, U.S.D.A.

*December 28*

9:00 A.M. Business Session

10:00 A.M.

(Madison Room)

## 1. Parity concepts—Discussion of report of association committee

Karl Brandt, Stanford University, Chairman

R. J. Eggert, American Meat Institute

George Henning, Colorado State College

Fred Waugh, Office of War Mobilization and Reconversion

Karl Wright, Michigan State College

H. R. Wellman, University of California

(Illinois Room)

## 2. Postwar agricultural problems

In the great plains area—W. E. Grimes, Kansas State College

In the corn belt—W. E. Crickman, U.S.D.A.

In the dairy regions—L. C. Cunningham, Cornell University

D. Howard Doane, Doane Agricultural Service, Chairman

Reviewer: W. W. Wilcox, University of Wisconsin

2:00 P.M.

(Madison Room)

1. Patterns of adjustments in southern agriculture—Discussion on re-  
port of association committee

Joseph Ackerman, Farm Foundation, Chairman

G. H. Aull, Clemson College

L. P. Gabbard, Texas Agricultural and Mechanical Col-  
lege

B. M. Gile, Louisiana State University

James Hand, Jr., Rolling Fork, Mississippi

E. L. Langsford, U.S.D.A.

O. C. Stine, U.S.D.A.

Frank Welch, Mississippi State College

(Illinois Room)

2. Contributions from the work simplification committee

The field for farm work simplification—I. R. Bierly, Cornell University and E. C. Young, Purdue University

An analysis of work simplification and research methods and results—L. S. Hardin, Purdue University and R. M. Carter, University of Vermont

Extension use of farm work simplification—Roy E. Proctor, University of Kentucky

E. C. Young, Purdue University, Chairman

Reviewer: S. A. Eugene, University of Minnesota

7:00 P.M.

Dinner Meeting

(Century Room)

Presentation of \$100 award for best journal paper—Warren C. Waite, University of Minnesota, Editor, Journal of Farm Economics

The agricultural economist and public opinion—W. H. Jasspon, U.S.D.A.

Discussion: Arthur Moore, Editor, The Prairie Farmer

The highlights of the \$5,000 award paper—William H. Nicholls, University of Chicago

Discussion: L. H. Simerl, Illinois Agricultural Association

R. K. Froker, University of Wisconsin



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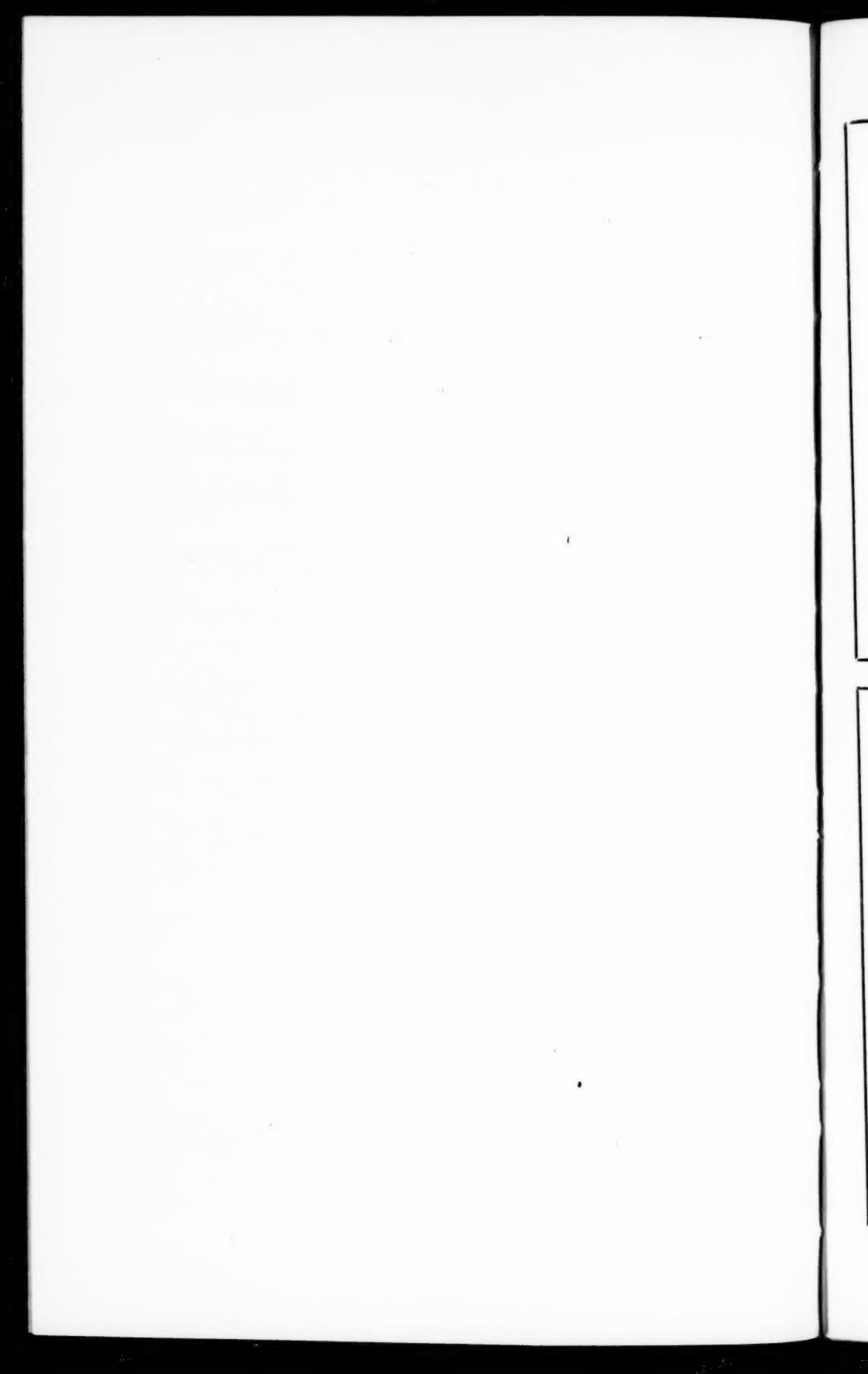
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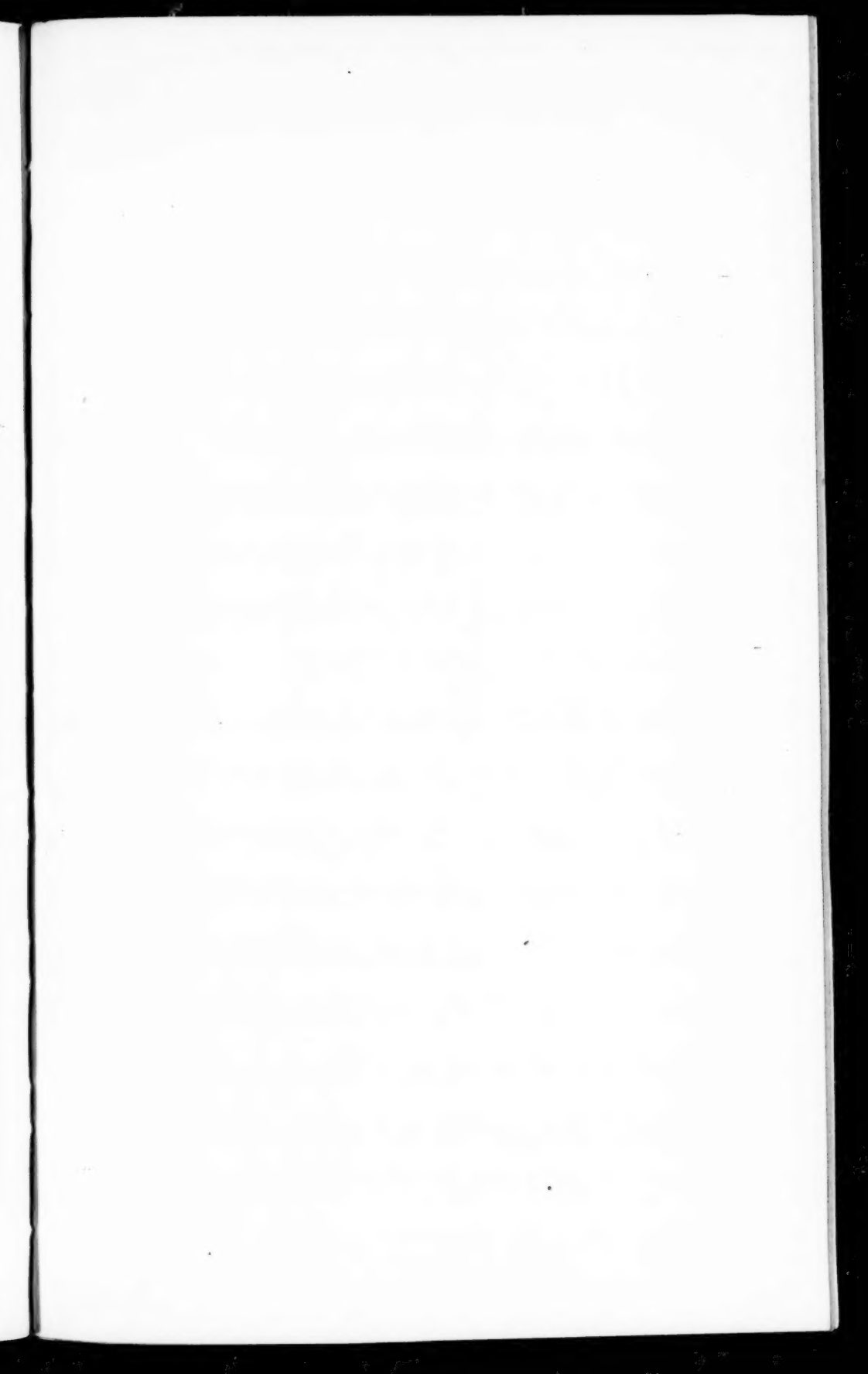
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